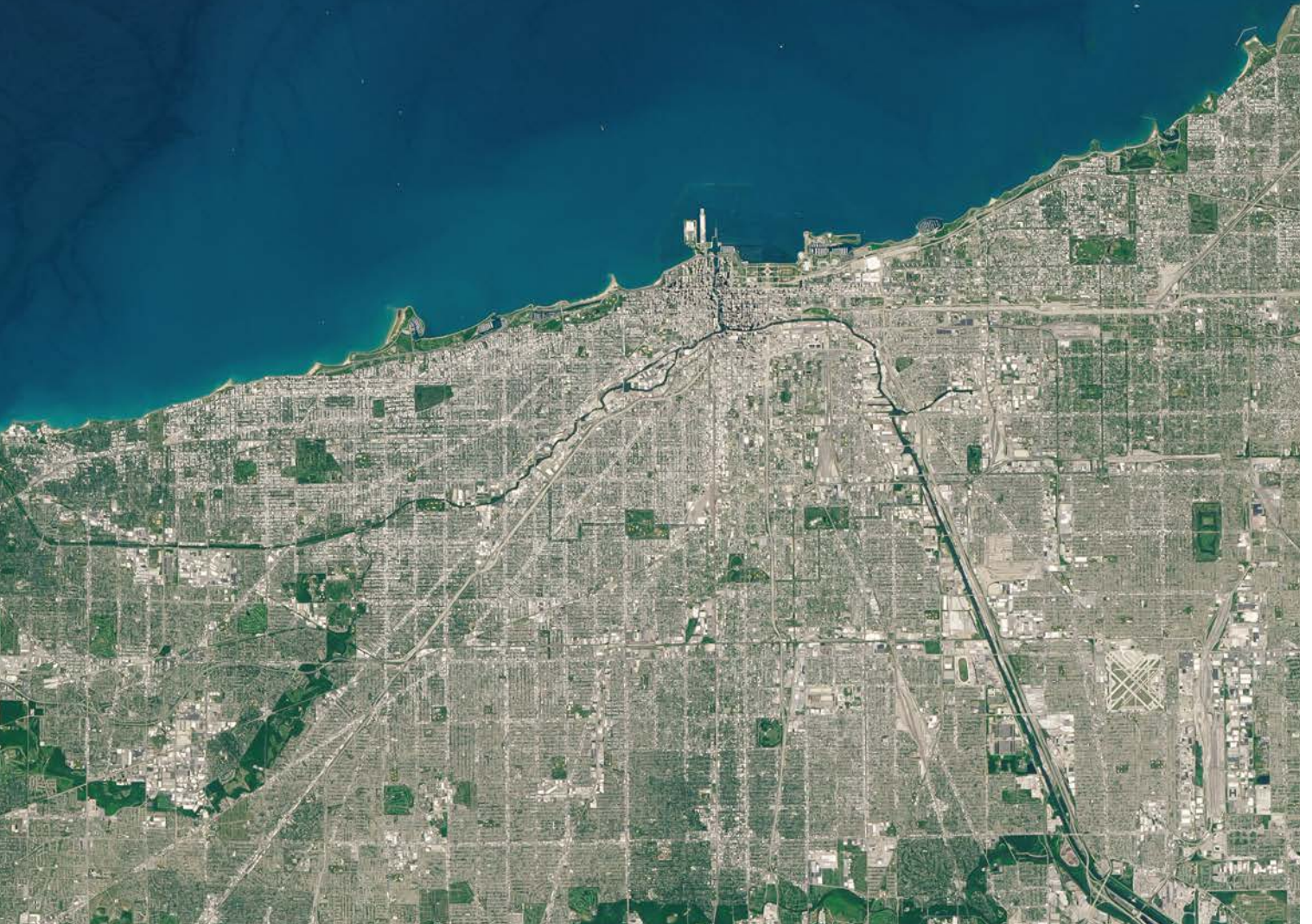


Mansueto Institute for Urban Innovation

THE FIRST FIVE YEARS



The First Five Years

Mansueto Institute
for Urban Innovation

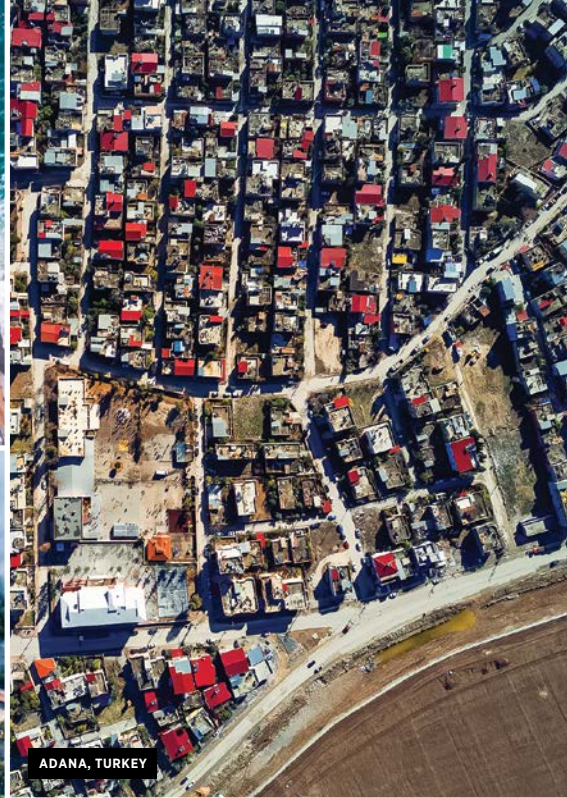
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of Chicago



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LIMA, PERU



ADANA, TURKEY



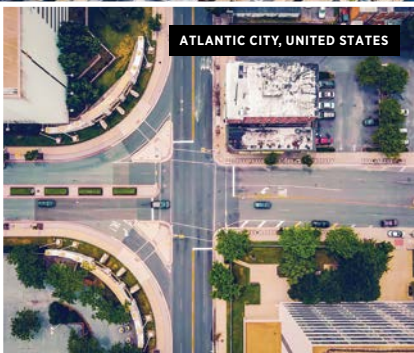
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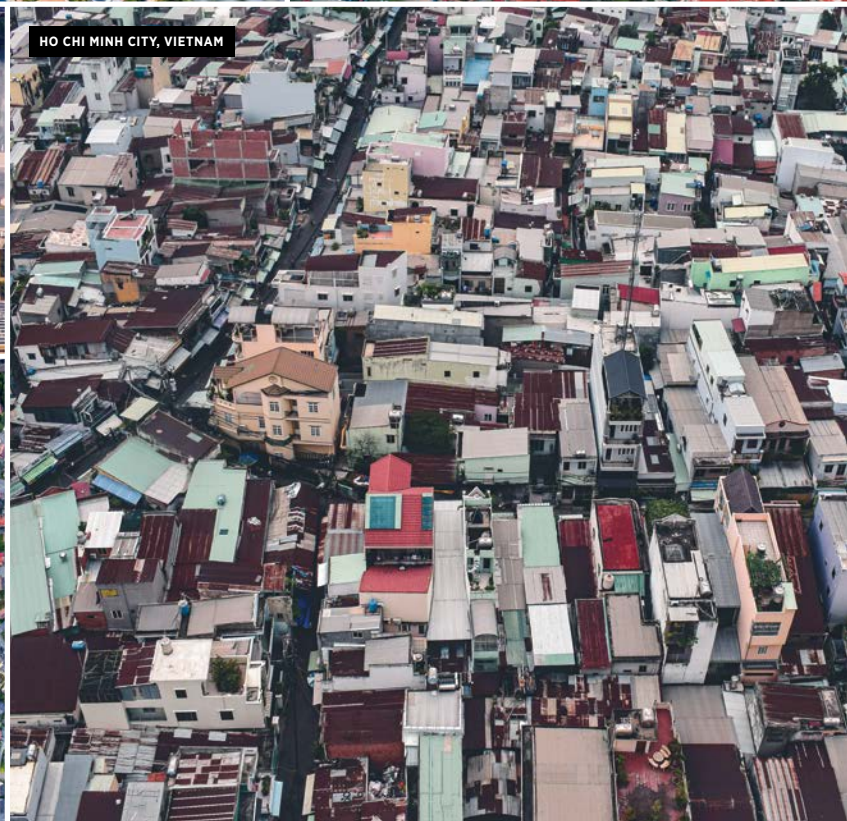
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- Letter from the Director** 05
- About the Mansueto Institute** 07
- An Urban Hub at the University of Chicago and Beyond** 10
 - SUPPORTING URBAN PROJECTS ACROSS CAMPUS 11
 - EXTERNAL PARTNERSHIPS 15
 - INCUBATING URBAN INITIATIVES 16
- Advancing Urban Science** 23
 - PUBLICATIONS 24
 - WORKING PAPER SERIES 24
 - VISUALIZING URBAN SCIENCE 26
- Creating an Urban Science and Scholarship Talent Pipeline** 28
 - FELLOWSHIP PROGRAMS 30
 - A NEW URBAN CURRICULUM 32
 - EXPERIENTIAL LEARNING 34
- Events & Media** 38
 - EVENTS 39
 - SELECT MEDIA COVERAGE 42
- Who We Are** 43
 - FACULTY ADVISORY COUNCIL 44
 - OUR SPACE 44
 - ACKNOWLEDGEMENTS 44



Cities uniquely define contemporary societies. From classical times and throughout history, the collective possibilities of human nature have constantly played out in cities. It is in cities that we negotiate the (re)invention of politics, economics, civic life, our ethics, and increasingly our relationship with natural environments.

Today, the dynamic and transformative power of urban environments is on display at its fullest, laying before us many possible complex futures that need to be understood, analyzed, and constructed quickly. The recent urbanization of East Asia has taken more than half a billion people out of poverty in a single generation and created economic miracles and innovations that have already changed the world. The urbanization of South Asia and Africa in the decades ahead demands new approaches to development that are faster, fairer, and more sustainable than anything that has come before. In parts of Europe and especially in North America, old ideas and political practices are showing their limitations addressing the challenges that face cities, including historic injustices, housing unaffordability, and rapid technological change. Here in Chicago, a city where so many urban concepts have been developed, the urgency for incorporating systemic knowledge into innovative and fair action, capable of tackling interconnected challenges of violence, injustice, and public financing, could hardly be clearer or more present.

The roaring vitality of cities has always inspired much discussion in society and politics, but for a long time, ideas remained bound to a few people's simplistic concepts of what a city should be, to local case studies, and to narrow disciplinary approaches. All this has changed recently. The rise of cities worldwide, the increasing availability of better data through emerging technologies, and the commonality of challenges encountered by diverse communities and governments around the world have forced the recognition that cities are a natural phenomenon that must be studied and understood rigorously, systematically, and holistically.

At the Mansueto Institute for Urban Innovation, we are developing an approach fit for this purpose and creating the institutional culture of innovation and excellence required to support it. We recognize that most innovation happens at the boundaries between traditional disciplines and in conceptual spaces where new methods and data face novel problems and can open new possibilities. We derive our inspiration and energy from the realities and challenges of our own city and those around the world, and from the skills and outlook of a new generation of students at the University of Chicago

and emerging scholars everywhere interested in systemic problems of justice, urban development, and sustainability.

As an institute, we are strategically positioned outside schools and academic departments to act both as a connective layer and as a platform, bringing together people from different disciplines across the sciences, the arts, and the humanities. In our own research, we aim to provide frameworks that create a clearer and more systemic understanding of cities by advancing the emerging field of urban science and practice, by studying cities as dynamic and adaptive complex systems, and by using the most advanced data and computational methods to enable new ways of seeing and acting in multi-scalar environments. We partner with many diverse groups at the University of Chicago and externally to learn faster, co-produce knowledge and tools, and share our approach. In this way, we strive to enable different stakeholders—including governments, community groups, the private sector, and individual citizens—to together imagine more innovative, responsive, and sustainable long-term solutions, using the best available knowledge and in contact with communities developing best practices in other cities.

Throughout history, cities have been the most singular source of change in human societies, innovating and enduring in the face of existential threats, from pandemics to economic crises to war. The present time is no different. As we face the enormous challenges of sustainability, wealth disparities, and justice in the decades ahead in a more urban and more complex world, developing a richer and more systematic understanding of cities in a collaborative and innovative environment is more important than ever. With this report, we are excited to share how this work has unfolded in our five formative years and point to what lies ahead.

— **Luís Bettencourt**

Inaugural Director, Mansueto Institute for Urban Innovation and Professor of Ecology and Evolution, the University of Chicago



About the Mansueto Institute

The University of Chicago was founded as an urban university dedicated to fundamental inquiry and the creation and re-invention of new disciplines.

Over 100 years ago, researchers at the university created an ambitious program to study cities systemically that still guides us today, building on pioneering work by Jane Addams and W.E.B. Du Bois and emerging social sciences from Europe. Faculty and graduate students at the University of Chicago defined scientific questions and developed empirical methods that would guide urban sociology and geography over the decades, establishing the Chicago School of Human Ecology. Later known as simply the “Chicago School,” the university’s researchers created the evidence and demonstrated the concept that people are shaped by, and in turn shape, the world that surrounds them—their social structures and built environment—and not just their individual biology.

IMAGES ON
PREVIOUS PAGE,
CLOCKWISE
FROM TOP LEFT

The Mansueto Institute sits in what was once the American Bar Association building on the South corridor of the University of Chicago’s 217-acre Hyde Park campus. The corridor includes the Harris School of Public Policy at the Keller Center; the David Rubenstein Forum; the Crown Family School of Social Work, Policy, and Practice; and the University of Chicago Law School.

Early draft of the famous radial map of Chicago, showing the city’s spatial and social organization, drawn by University of Chicago sociology professor Ernest Watson Burgess, who helped develop what is now known as the Chicago School of sociology.

A map published in 1895 by the Hull-House, founded by Jane Addams. The map shows the detailed spatial distribution of household wages, and of poverty. The Chicago School would later create many other detailed maps and data, quantifying a wide range of social issues in Chicago and other cities.

In 2006, then-President Robert Zimmer articulated a vision of the University of Chicago as an urban university in the 21st century. This comprehensive strategy expanded the Office of Civic Engagement, launched the Urban Labs, and created UChicago Urban, an initiative within the Provost's office linking all urban-focused efforts at University of Chicago.

The Mansueto Institute for Urban Innovation was founded within this larger context of reinvigorated urban research and leadership. Joe Mansueto, AB '78, MBA '80, and Rika Mansueto, AB '91, both alumni of the University of Chicago, recognized the need for a structure at the university that could create innovative opportunities for urban scholarship and education and have a lasting impact on cities around the world.

They funded the Mansueto Institute in 2017 with a generous \$35 million gift. The goal would be to put cities at the heart of the university, creating a culture of interdisciplinarity and innovation across campus and beyond.

In the spirit of being a crossroads of urban activity, the Mansueto Institute incorporated the functions of UChicago Urban and helped to grow them into the University of Chicago's Urban Network, which includes and promotes departments, centers, and institutes across the university working on urban issues.

The Mansueto Institute is built on the principle that innovation happens at the edges between traditional fields, where different ideas meet, and when new methods, technologies, and data are challenged and applied to new questions. At a university, this requires a special organizational structure, one that is outside other academic units, and that supports projects that push the limits fundamental to existing disciplines. In doing this, we have sought to establish a collaborative space and local culture of supportive, multi-disciplinary innovation by bringing together researchers, academic units, visitors, students, and early career scholars from different disciplines, using diverse methods across the university and beyond.

In its first five years, the Mansueto Institute has seeded initiatives to develop new ways of addressing city life, from

housing to the environment to mental health to infrastructure. We have brought together disciplines from the natural, computational, and social sciences as well as the arts and humanities, to work on a variety of research projects, education and training programs, and conversations and events. We have supported the work of faculty, staff, and students across the university, encouraging a culture of collaboration, exchange, and excellence. And we have advanced the emerging discipline of urban science, based on the principle that cities around the globe share many fundamental processes and characteristics.

Our work has helped various stakeholders, both locally and globally, address the complexity of cities and make more informed and more systemic decisions. With this report, we hope to provide a summary and perspective on our activities and accomplishments so far. We hope that our experience provides inspiration and a model for other efforts around cities and sustainable development in the years ahead.



Our work has helped various stakeholders, locally and globally, address the complexity of cities and make more informed and more systemic decisions.

Image of night lights from Europe, Central Asia, and North Africa, captured by NASA's visible infrared imaging radiometer suite (VIIRS) in 2016. New remote sensing data demonstrate the importance of cities as centers of population and economic activity globally.

The Mansueto Institute Mission

Accumulate and synthesize a body of rigorous, empirically based, fundamental knowledge about cities, urbanization, and sustainable development as a hub for urban science

Train the next generation of urban scholars

Build a transformative network of partnerships to share insights from urban science and practice and advance sustainability



An Urban Hub at the University of Chicago and Beyond

Urban innovation is not the work of any one field, discipline, or group of people. It requires interaction, challenge, collaborations, and optimism, which must be created, supported, and sustained. The Mansueto Institute for Urban Innovation has created a new public space for urban research and practice, based on bringing people together around a common appreciation of the human experience in cities and the creative power of urban environments for social and environmental change.



The L train, running through Chicago's River North neighborhood.

A significant part of our work consists of supporting and partnering with academic units and researchers around the University of Chicago campus. Beyond the university, we foster collaborations with civic, government, and nongovernmental organizations, corporations, nonprofits, and community groups to address common problems faced by cities. We seek to spur innovation by breaking down silos and creating environments that support more systemic efforts that go beyond the traditional structure of university research. We have devoted this section of the report to illustrations of what this support looks like, including examples of partnerships, grants, and initiatives in the urban space.

Supporting Urban Projects Across Campus

The University of Chicago is a vibrant community of scholars, researchers, staff, and students, pursuing initiatives and projects across the spectrum of urban scholarship, practice, and innovation. The Mansueto Institute supports work across the university that complements the role of schools and departments. We seek to identify promising interdisciplinary research, innovative forms of external engagement with practice, new conceptual questions and methods, underexplored dialogues, and forms of co-production that may not be able to find support from other university structures. Such efforts are also designed to take advantage of, and contribute to, our cross-disciplinary and rich intellectual environment. Our support includes a tailored combination of funding, staff time, and expertise; intellectual framing; student and postdoctoral research assistants; data and technology support; and membership in a larger interdisciplinary community of scholars and problem solvers.

PROJECTS SUPPORTED INCLUDE

CIVIC SCOPEATHON

The Mansueto Institute has financially supported the annual South Side Civic Scopeathon, a joint program of the Harris School of Public Policy and the Department of Computer Science at the University of Chicago and South Side Civic, a network of South Side nonprofits, small public offices, and social entrepreneurs. Participants come from diverse backgrounds, including computer science, political science and public policy, economics, geography, visual arts, and civic innovation and leadership. At the event, teams of civic organization leaders, students, and community members scope out problems faced by civic organizations and develop novel, integrated solutions to address them.

DATA SCIENCE FOR SOCIAL GOOD

In 2017, we provided significant financial and logistical support to the Data Science for Social Good Summer Fellowship, led by Rayid Ghani, a senior fellow at the Harris School. The program trains students to work in partnership with nonprofits as tech-savvy consultants-in-training, analyzing programmatic challenges, organizing and cleaning data, and bringing data science methods and policy recommendations to their clients. The program works by matching students, teams, and client civic organizations from all over the world, creating a template for engaged, urban data science that has been followed by numerous other groups since.

ETHNOGRAPHY INCUBATOR

We provided financial and logistical support to a team of faculty in the Department of Sociology for their “Ethnography Incubator.” An innovative pedagogical tool and convening to explore the methodology of ethnography and encourage new approaches that adapt to digital forms of communication, the effort embodied the Mansueto Institute’s commitment to innovative forms of inquiry into urban processes. A postdoctoral fellow was jointly supported by the Mansueto Institute and the Social Sciences Division to develop the incubator’s teaching and training in multi-media ethnography.

GALÁPAGOS STUDIO

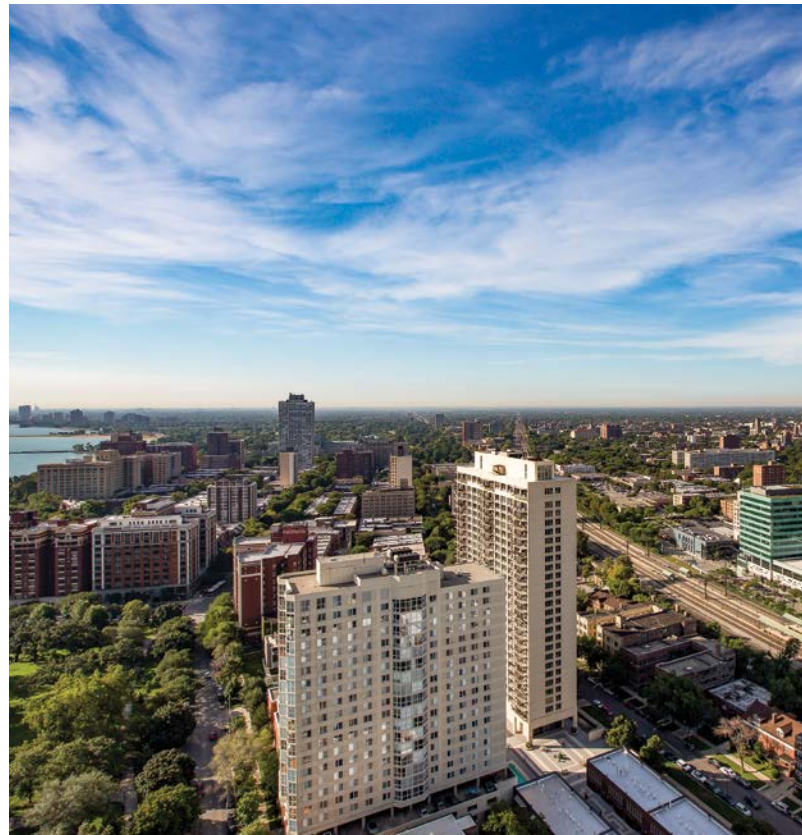
With the University of Chicago College and the University San Francisco de Quito in Ecuador, we created an international studio course in the Galápagos Islands on sustainable urbanization. University of Chicago undergraduate students collaborated with local students, Galápagos government partners, and Mapillary—a platform for sharing crowd-sourced street photos—to produce the first street view digital maps of the two fastest growing towns in this ecologically sensitive archipelago. Student and postdoctoral participants gained the critical computational and policy skills necessary to tackle challenges of sustainability in real world developing environments. The studio’s interdisciplinary focus on digital mapping, sustainable growth, architecture, and energy analysis was a natural outgrowth of Mansueto’s research and network of relationships, including international partners, several architectural schools, the National Renewable Energy Laboratory, and companies such as Mapillary. The studio has run for two years, but was interrupted by the COVID-19 pandemic. It is currently expected to continue in coordination with the University of Chicago College.

SOUTH SIDE DATA HOUSING PROJECT

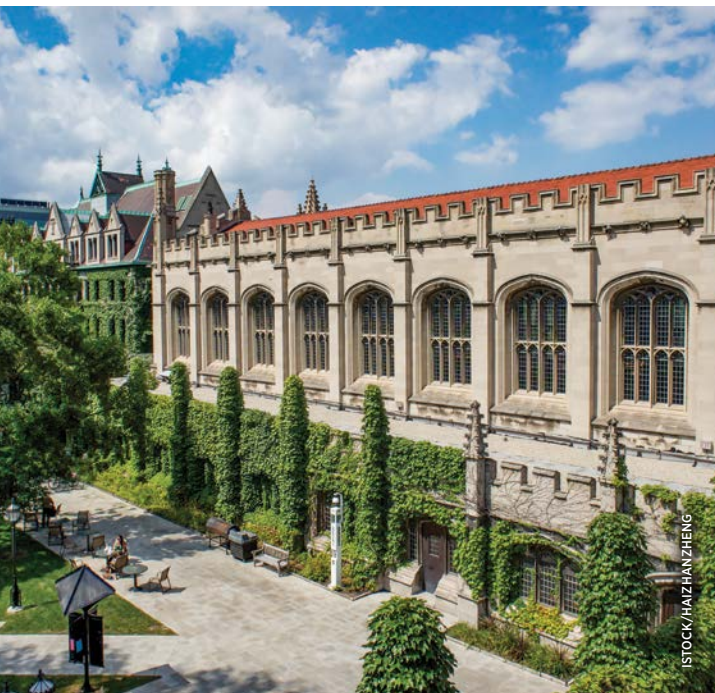
We provided funding and an intellectual home for the University of Chicago Office of Civic Engagement’s South Side Housing Data Project, an initiative with the Harris School of Policy to train students to gather housing data on the South Side of Chicago. The Mansueto Institute’s financial and administrative support ensured continuity for students, staff, and community partner organizations. The institute also brought technical data sciences expertise and engaged with our colleagues on questions of data transparency, management, and technical innovation, suggesting directions for the project that would incorporate high-precision remote sensing data and new methods of community engagement.



Students in the Galápagos Studio program in 2019.



The South Side Housing Data Project is a collaborative initiative to gather data on housing in the South Side of Chicago.



TRAUMA INTEREST WORKING GROUP

The Trauma Interest Working Group (TIWG) is a network of scholars and clinicians engaged in improving the university’s response to trauma through education, research, clinical care, community service, and advocacy. With funds, convening support, and program development support from Mansueto Institute leadership and staff, faculty from psychology, law, social work, public policy, medicine, public health, environmental science, human development, economics, and sociology have met for the last four years. TIWG organized several events, including a film festival, a conference, and a speaker series on gun violence, inequality in schools, and engagement of Black youth during the COVID-19 pandemic. The Mansueto Institute’s cultivation of this cross-campus partnership has filled a void in urban trauma research, allowing scholars and practitioners to build bridges among themselves and with the communities they serve. TIWG has raised institutional awareness of inequitable systems and structural violence to help promote practices and policies to achieve greater health equity in the communities served by the University of Chicago.

The Mansueto Institute is one of more than 20 schools, centers, or initiatives across campus that make up the UChicago Urban Network, which works to advance the future of cities and enrich urban life through science, policy, and community engagement. The Mansueto Institute works with the Urban Network on urban-themed events and communications, including Urban October, an annual month-long program of events across the University of Chicago.

TRAFFIC SAFETY RESEARCH

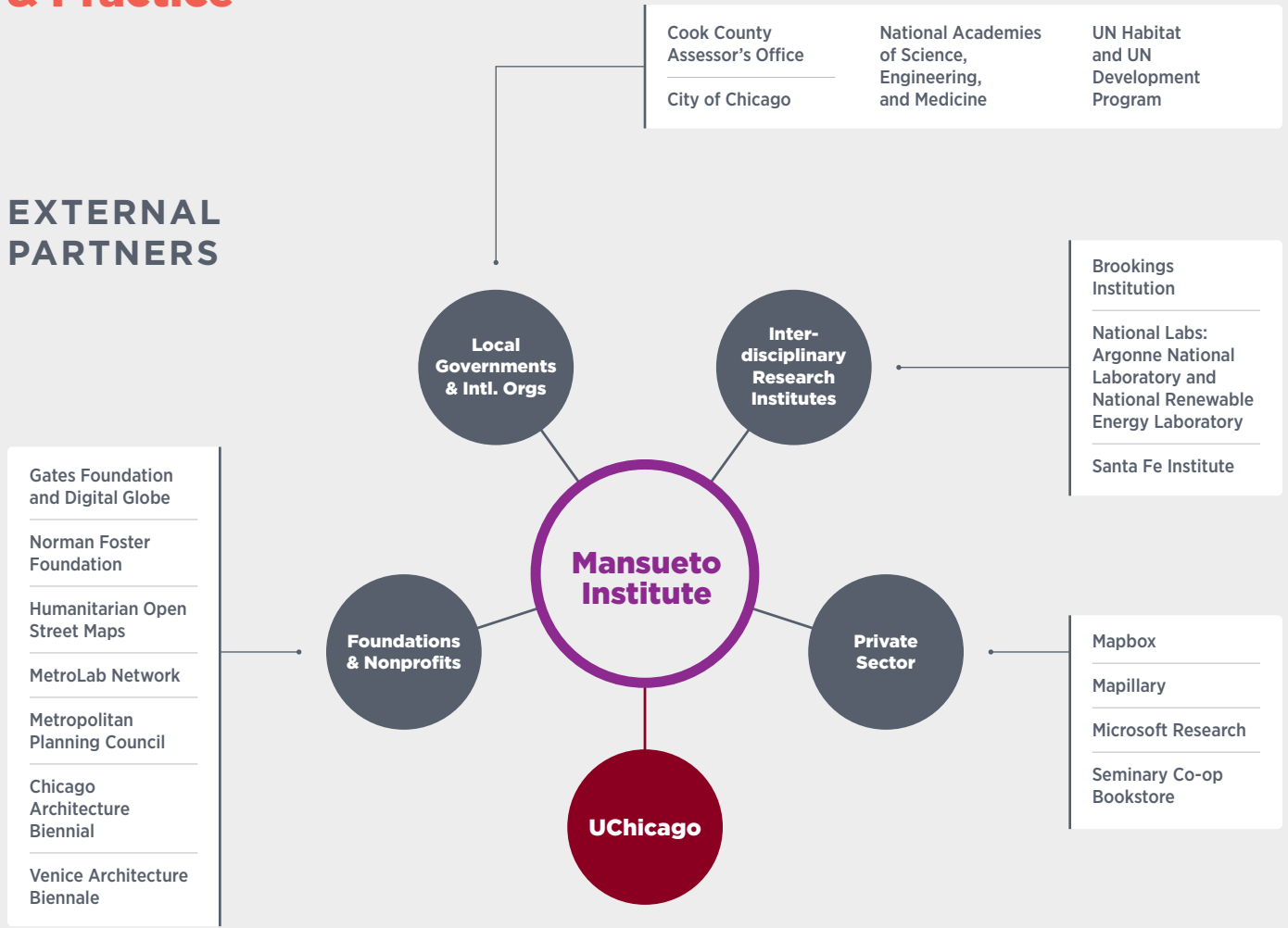
The Mansueto Institute is supporting novel traffic safety research led by Kavi Bhalla and Eric Polley, both associate professors of public health sciences in the Division of Biological Sciences. They use detailed vehicular telematics data to assess the effects of Chicago’s red-light camera system. They are investigating whether harsh braking events are more common at intersections with cameras than at comparable intersections without cameras. In future work, they hope to identify a set of policies and road design interventions to prevent childhood traffic injuries. This work will complement other efforts to inform the upcoming University of Chicago campus masterplan, aiming at calming traffic, reducing injuries, and improving environmental quality at the university and across the city of Chicago.

URBAN NETWORK

The Mansueto Institute has provided financial and intellectual leadership for the University of Chicago’s Urban Network, a central communications effort to raise visibility of urban scholarship and practice across campus. The Urban Network connects and amplifies the voice of all of the departments, centers, and institutes across the university working on urban issues. This includes themes of public safety, public health, education, environmental sustainability, and equity. The network works with university central communications to advance the future of cities and enrich urban life through data-driven science, fundamental ideas, innovative policy solutions, and immersive community engagement.

A Hub for Urban Science, Scholarship, & Practice

EXTERNAL PARTNERS



UCHICAGO PARTNERS

Biological Sciences Division	Crown Family School of Social Work	Division of the Humanities	Research Computing Center
Booth School of Business	Data Science Institute	Division of Social Sciences	UChicago Global
Center for Robust Decision-making on Climate and Energy Policy	Department of Art History	Harris School of Public Policy	University Communications
Center for Spatial Data Science	Department of Computer Science	Office of Civic Engagement	University of Chicago College
Chicago Studies Program	Department of Sociology	Physical Sciences Division	University of Chicago Law School
		Program on Global Environment	Urban Network

External Partnerships

The Mansueto Institute works with peer institutions, nongovernmental organizations, foundations, technology companies, and others to develop and support collaborative spaces dedicated to new perspectives, research, and training. Together, we create scientific frameworks, new methods, and tools that can help close the loop between science, practice, and policy. Our contributions are systemic and multifaceted, including assembling interdisciplinary teams, creating collaborative venues and events, and providing training and education in urban science and practice. Examples are:

GATES FOUNDATION AND MAXAR

Through a partnership with the Bill and Melinda Gates Foundation, the Mansueto Institute is one of a network of researchers using high precision remote sensing from Maxar, which provides satellite and aerial imaging data about patterns of urbanization throughout the world. The Mansueto Institute uses the data for the Million Neighborhoods Initiative—a project to identify and map critically underserved neighborhoods around the world, such as slums, favelas, and other informal settlements. The project develops generalizable tools to help improve the planning and formalization of these settlements, in collaboration with communities, NGOs and local governments.

MICROSOFT RESEARCH, PROJECT ECLIPSE

The Mansueto Institute's Array of Things initiative partnered with Microsoft Research's Urban Innovation Lab on Project Eclipse, which in 2021 deployed over 100 low-cost air pollution sensors across the city of Chicago. Sensors were located based on guidance from local communities to map air quality in real time and create publicly available data. The initiative has provided new data to local environmental nonprofits, such as the Environmental Law and Policy Center, which is using it to build evidence based and community-centered research and policy.

SANTA FE INSTITUTE, GLOBAL SUSTAINABILITY SUMMER SCHOOL

In 2019, the Mansueto Institute partnered with the Santa Fe Institute to organize and run the Global Sustainability Summer School, an intensive two-week program on the role cities play in leading a global sustainability transition. The school summarizes new science, innovative policies, and technological innovation, supporting sustainable development across scales. The program brought together postdoctoral fellows, graduate students, early-career scientists, policymakers, technologists, and business professionals. Participants gained background knowledge and hands-on experience supporting interdisciplinary research and practice in areas related to urban sustainability.



Participants in the Santa Fe Institute Global Sustainability Summer School, summer 2019.

Incubating Urban Initiatives

The Mansueto Institute has developed a format for innovation through our University of Chicago faculty-led initiatives. We work with our faculty to identify and support the early development of research, educational programs, and thematic efforts with promise for substantial innovation in science, methods, or practice. Initiatives are expected to grow and become independent over time, so that new ones can be supported. We provide initiatives with tailored financial support, communications, research infrastructure, operations, and community to accelerate their development. The institute works to identify efforts that transcend traditional disciplines or conventional methods, with special promise for systemic understanding and transformative change.

“Slums and informal settlements are not reflected on plans and maps. We really welcome this initiative. It can be a powerful tool.”

— **Kerstin Sommer**

LEADER OF THE SLUM UPGRADING
UNIT FOR UN-HABITAT, KENYA

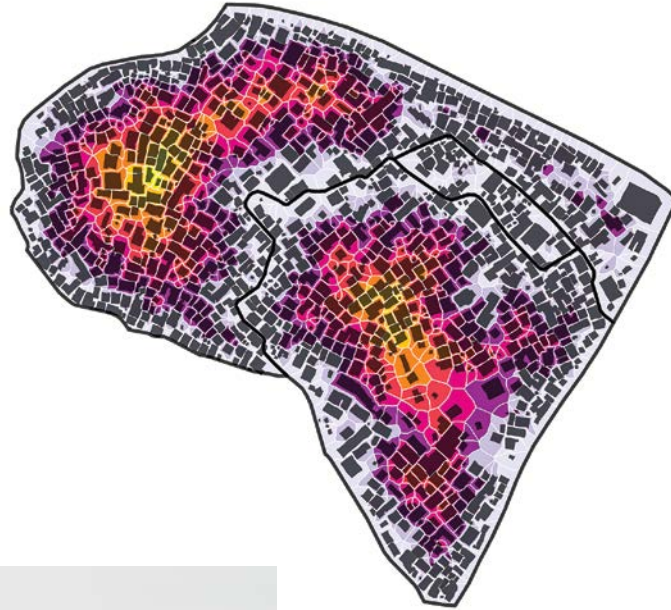
We have incubated and supported efforts related to fundamental themes including: human development, inequality, and neighborhoods; urban cognition and real-world decision-making in complex urban environments; housing and civic innovation; climate change, energy transitions, and urban sustainability; urban architecture and design; real-time distributed sensing, air pollution distributed sensing, novel methods for spatial data science; and interdisciplinary approaches to innovation and growth.

MILLION NEIGHBORHOODS

The population of Africa is expected to double to 2.5 billion between 2020 and 2050, about two-thirds of predicted global population growth. Nearly 80% of this population growth is expected to take place in urban areas. Currently over half of the residents of African cities and other urban areas of the Global South live in neighborhoods characterized as slums or informal settlements. The Million Neighborhoods Initiative, led by Luís Bettencourt, is leveraging its past research with neighborhood community mapping and data collections, and combining it with high precision remote sensing of building footprints, to create the first ever map of neighborhoods across Sub-Saharan Africa. The team used a new, comprehensive dataset of building footprints across the continent, street networks, and population maps at larger scales to identify neighborhoods, analyze statistical patterns of human settlement, and map out small spatial areas lacking urban services. The analysis is based on a new, fast, and scalable set of algorithms that use concepts of topology and network analysis to identify lack of street access to buildings in each city block. Communities, local groups, city planners, and non-governmental organizations can use this data to target infrastructure upgrades for the millions of people who call these informal settlements home.



An informal settlement in sub-Saharan Africa.



In 2022, the Million Neighborhoods initiative mapped the entirety of neighborhoods in sub-Saharan Africa, making it possible to visualize informal settlements and enable local groups, city planners, and non-governmental organizations to target infrastructure expansion and upgrades in each city block.



David Kreisman, AB '60, JD '63, whose support made possible the Kreisman Initiative for Housing Law and Policy.



Daniel Kreisman, MPP '07, PhD '12, and current associate professor of economics at Georgia State University, welcoming speakers at the Kreisman Symposium in 2022.

ACCESSIBILITY TO STREETS



KREISMAN INITIATIVE FOR HOUSING LAW AND POLICY

The Kreisman Initiative for Housing Law and Policy is the only effort at the University of Chicago dedicated to housing scholarship and practice. It was made possible by the generous support of David Kreisman, AB '60, JD '63, an attorney inspired by a lack of programs for students interested in careers in housing. Bringing together policy, social services, business, law, and social and data sciences, the initiative's mission is to advance new ideas about housing in cities through research, external engagement, and a graduate fellowship program. After an initial start at the University of Chicago Law School, the initiative moved to the Mansueto Institute in 2018. In May 2022, the initiative hosted its first symposium, "Beyond the Single-Family Home: Zoning, Equity, and Access," bringing together experts from Chicago and around the country in city government, housing organizations, design firms, and academia.

“Such a bold cartographic vision would have been impossible to generate until recently thanks to new technological advances in remote sensing and computing power. Ever higher resolution spatial photography from satellites and drones has enabled user-generated projects such as OpenStreetMap, the so-called wiki of maps, where volunteers use photos to trace buildings onto maps, especially in the wake of humanitarian crises. These efforts have produced baseline maps for the kinds of informal settlements that Million Neighborhoods hopes to take one step further by highlighting where there are gaps in street infrastructure.”

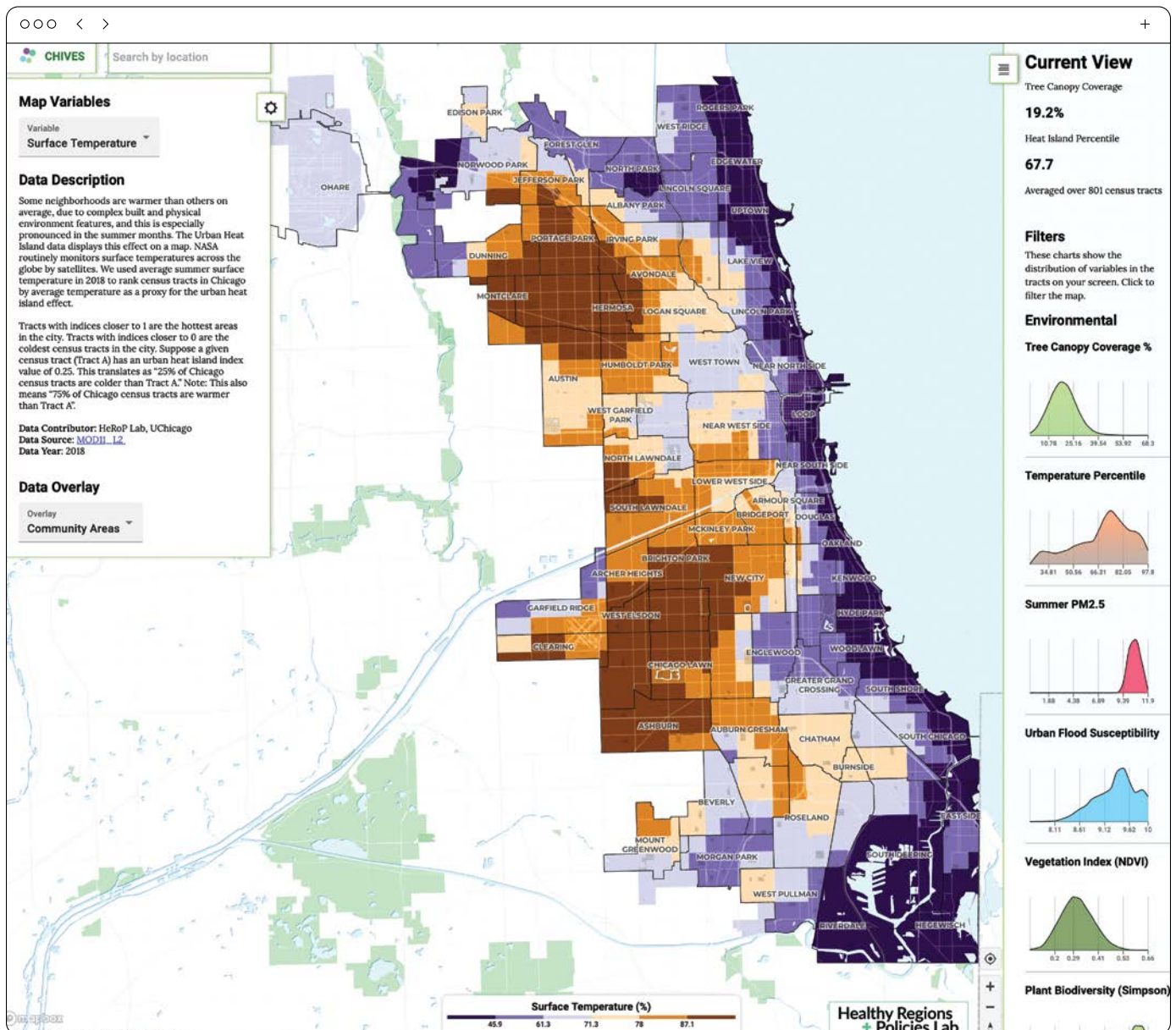
— Next City

CENTER FOR SPATIAL DATA SCIENCE

The Mansueto Institute has found a natural partner in The Center for Spatial Data Science (CSDS), led by Luc Anselin, the Stein-Freiler Distinguished Service Professor of Sociology, and a long-standing pioneer in spatial econometrics, and executive director Julia Koschinsky. CSDS shares postdoctoral researchers and students with the Mansueto Institute and develops state-of-the-art methods for geospatial analysis; implements them through open source software tools; applies them to policy-relevant research in the social sciences; and disseminates these tools to

a community of over half a million spatial analysts. Housed in the University of Chicago's Division of Social Sciences, CSDS created in 2020 a COVID Atlas to connect spatial data about COVID-19 with other indicators that can help forecast viral spread, understand vaccine trends, and make visible the communities that are most vulnerable. In 2022, the center's Healthy Regions & Policy Lab (HeRoP) launched ChiVes, which maps key metrics of Chicago's urban environment, including tree cover, air pollution estimates, heat island effects, and traffic volumes.

A map of Chicago tree canopy coverage produced by the Healthy Regions & Policy Lab in the Center for Spatial Data Science.





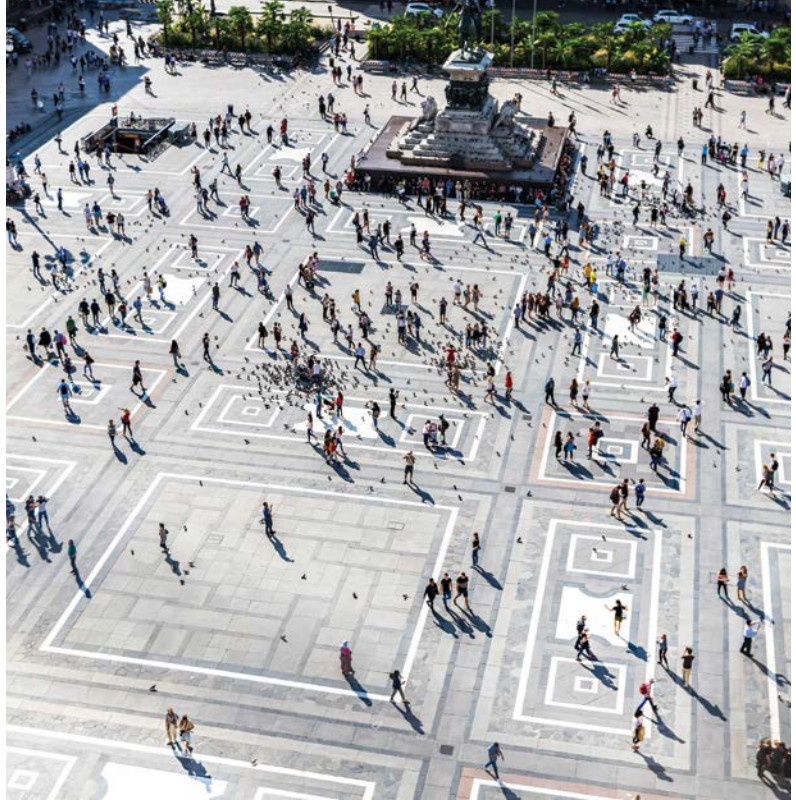
The Environmental Frontiers program focuses on sustainability at the University of Chicago campus, including water use from the South Campus Chiller Plant, pictured.

ENVIRONMENTAL FRONTIERS

Environmental Frontiers is the Mansueto Institute's platform for ambitious, interdisciplinary, focused research and training in urban sustainability. In its first five years, the initiative has focused on EF Campus, student-faculty research and educational opportunities that give University of Chicago students a scientific and practical understanding of environmentally sustainable urban development. Under the leadership of Elizabeth Moyer, associate professor in the Department of Geophysical Sciences, and Sabina Shaikh, associate senior instructional professor of Environmental and Urban Studies, the initiative spans the physical, biological, and social sciences, complementing existing and emerging course curriculum in Environmental and Urban Studies, Environmental Sciences, and other programs. Environmental Frontiers has helped the University of Chicago launch a sustainability dashboard to track and advance institutional data transparency about energy use. Environmental Frontiers also coordinated EFGalápagos, an international research opportunity for University of Chicago undergraduate students to gain critical computational and policy skills necessary to become future leaders in urban sustainability, as well as the 2019 Global Sustainability Summer School at the Santa Fe Institute.

URBAN ARCHITECTURE AND DESIGN

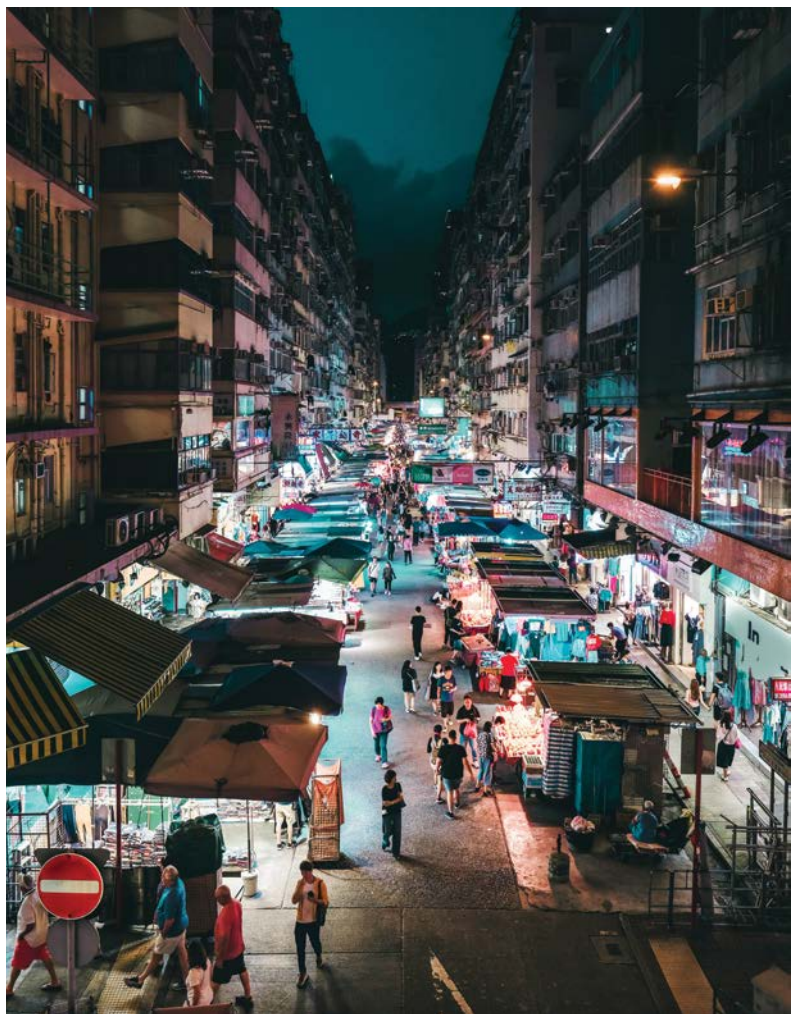
The initiative on Urban Architecture and Design brings together University of Chicago faculty, under the leadership of faculty in the Humanities Division, along with leading design practitioners, to pursue research, programs, and pedagogy that face the challenge of today's environmental, social, and economic imperatives, in order to transform how we envision the future of the built environment. Given that the university does not have a school of architecture, urban planning, or design, the Urban Architecture and Design Initiative provides an intellectual home for these fields and meets growing student demand for engagement with careers in the built environment. Led by Niall Atkinson, chair of the Department of Art History, along with Bill Brown, the Karla Scherer Distinguished Service Professor in American Culture in the Department of English, and Christine Mehring, the Mary L. Block Professor of Art History, the initiative has hosted workshops and talks with leading designers, a series on physics and contemporary architecture, and developed a curriculum for the minor in architectural studies, which it runs with Mansueto Institute support. Urban Architecture and Design faculty served as commissioners for the U.S. Pavilion at the 2018 Venice Architecture Biennale. In 2021, the initiative launched a series of open studios, bringing together students from across the university to explore topics in architecture and urban design, featuring speakers from Chicago and beyond.



Rates of depression are lower in larger urban areas, as a result of more extensive personal social networks, on average, in denser built environments, according to a study published in 2021 by the Urban Cognition Initiative.

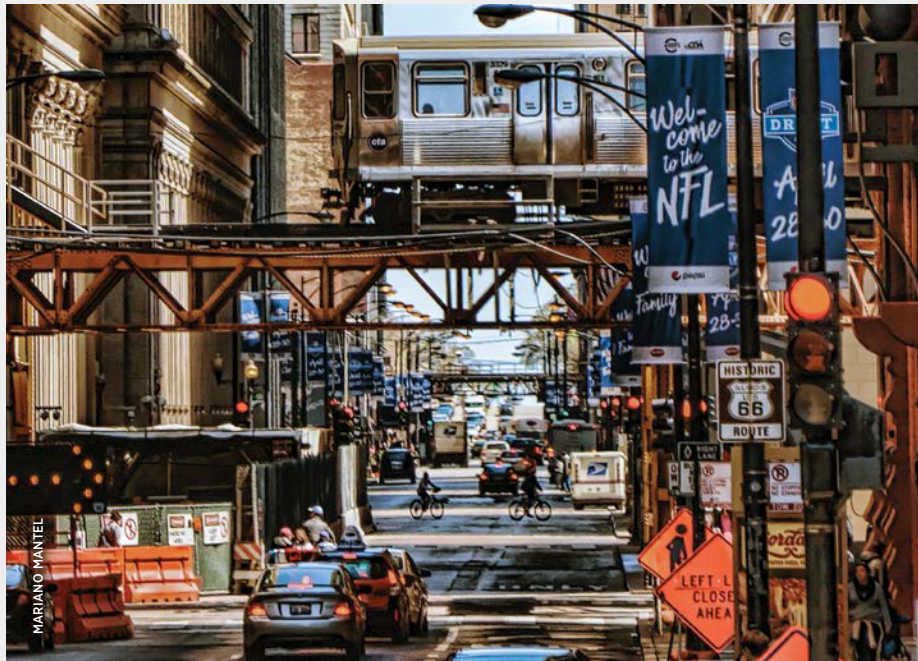
URBAN COGNITION INITIATIVE

The Urban Cognition Initiative studies how urban environments affect an individual's brain and behavior. Led by Marc Berman, associate professor of Psychology, and head of the Environmental Neuroscience Lab in the Department of Psychology, the initiative develops experiments, methodologies, and instruments for discovering how people respond, physically and cognitively, to different kinds of places. The Initiative's findings help spatial designers, policy makers, and planners build urban spaces that better foster human well-being and social life. In 2021, the Urban Cognition Initiative published a widely covered study in Proceedings of the National Academy of Sciences finding that rates of depression are predictably lower in larger urban areas, related to larger personal social networks in denser built environments, in accordance with urban scaling theory.

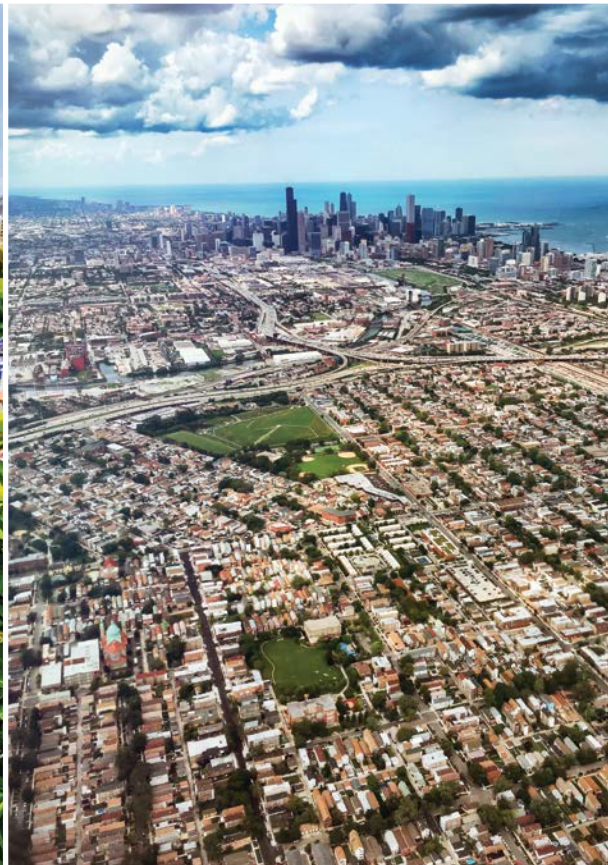
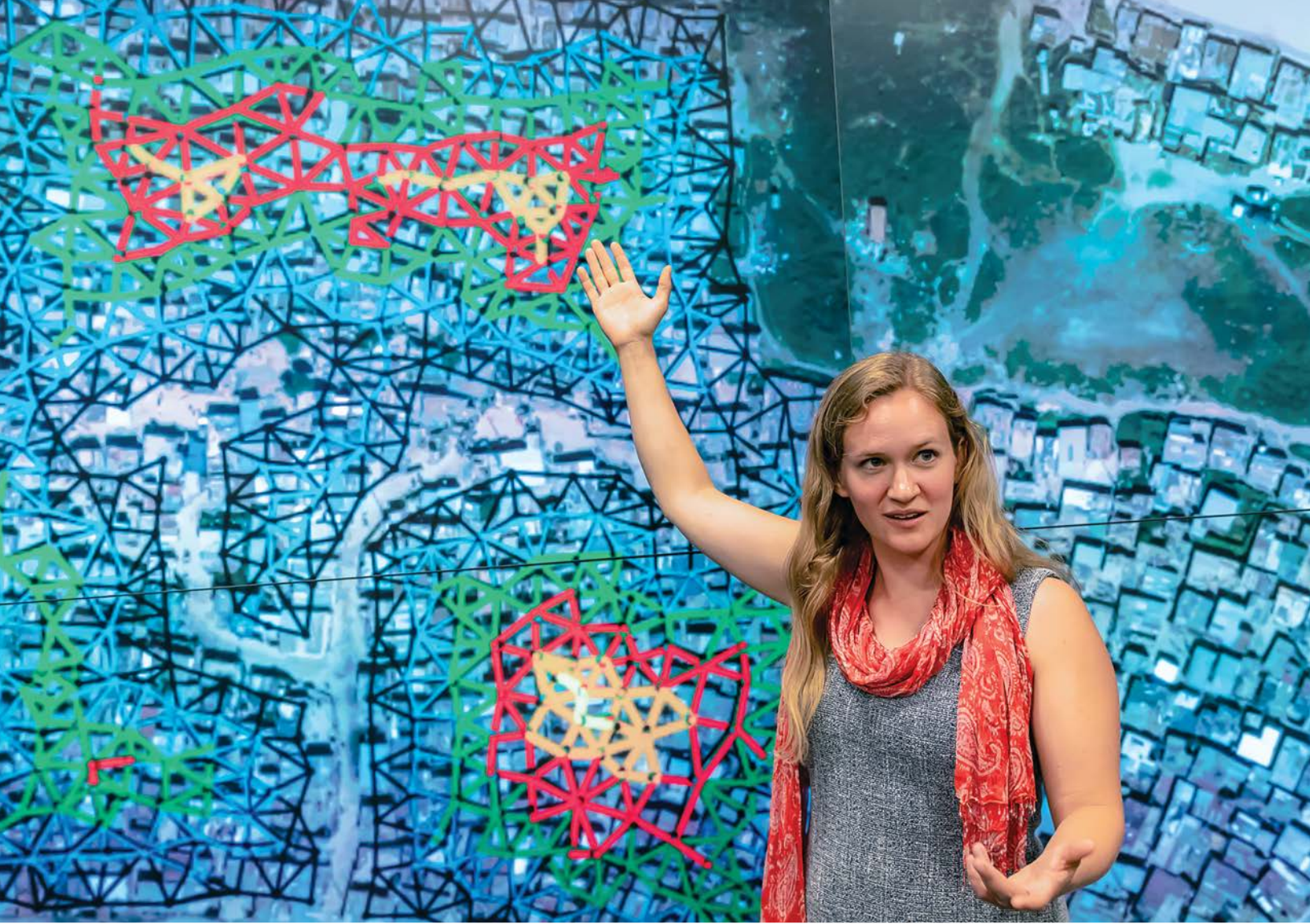


ARRAY OF THINGS

The Array of Things (“AoT”) is a collaboration with local government, communities, and industry partners to develop new approaches to collecting real-time data on urban environments. It was created in 2012 with leadership from the University of Chicago and Argonne National Laboratory and became one of the charter initiatives in 2017 when the Mansueto Institute was founded. From 2016 to 2019, the AoT team, led by Charlie Catlett, senior computer scientist at Argonne and visiting fellow at the Mansueto Institute, created the concept of a “fitness tracker for the city,” designing and installing over 150 “nodes” throughout Chicago. With diverse sensors and computing capability, the sensors can measure the city’s environment across a number of variables, such as air quality, traffic, and noise, as well as pedestrian or vehicle flows using new types of image processing. Over 4.2 billion measurements have been made publicly available for individuals, organizations, researchers, engineers, and scientists to study urban environments, develop new data analysis tools and applications, and inform urban planning. In 2020, the program began a migration to “AoT 2.0,” comprising two complementary initiatives. The first is to help communities create their own “fitness trackers.” Partnering with Microsoft Research’s Project Eclipse, JCDecaux, and Chicago community groups, the team installed around 120 low-cost air pollution sensors throughout the city, to provide vulnerable communities with data and tools to understand air quality in their neighborhoods and city-wide. The second is a new project called SAGE: A Software-Defined Sensor Network, funded by the National Science Foundation, to expand the research community’s capacity to use AI-empowered “nodes” to develop more advanced measurements, such as detecting “near miss” traffic collisions or flooding.



The Array of Things initiative installed nodes and sensors throughout the city of Chicago to collect real-time data on air quality, traffic, noise, and pedestrian flows.

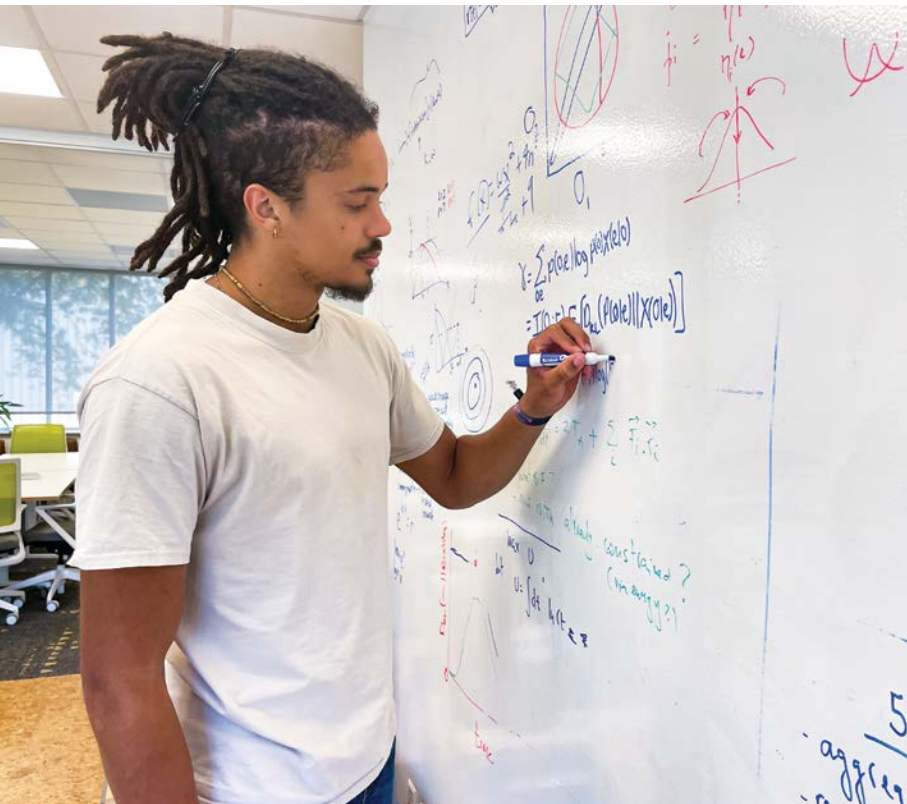


Advancing Urban Science

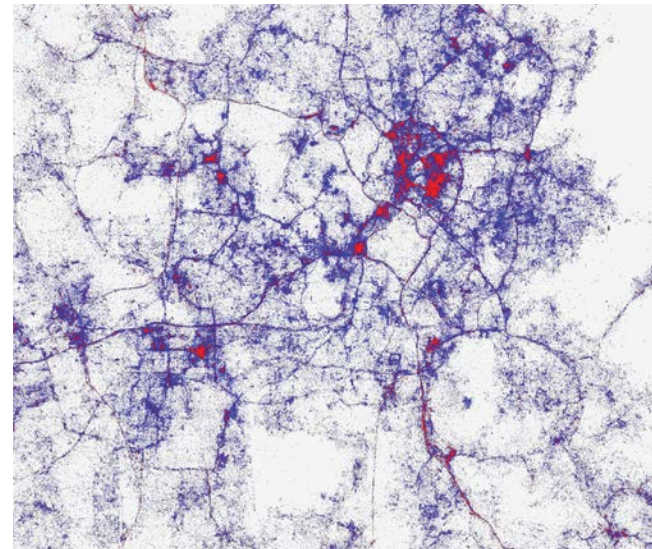
As an urban research institute with an ambitious intellectual agenda, we not only support the university's urban research community, but also lead scientific research and the development of novel methods and theory. Through research and development, we're defining and advancing the field of urban science, an emerging discipline that involves the systematic empirical study of how cities work, grow, and develop. This approach uses interdisciplinary concepts; a rigorous comparative approach; and the best emergent data across time, geography, and level of development, to distill predictive and generalizable knowledge about cities and urbanization.

Urban science is the general study of cities by scientific methods, posing hypotheses for how they work as systems and testing them rigorously using evidence, across scales, geographies, time, and levels of development. As a framework, urban science allows us to synthesize and systematize how we collect and analyze data to create knowledge that can be shared across cities as they confront common challenges including climate change, economic inequality, rapid urbanization or depopulation, crime, and pandemics. Urban science is oriented to the identification of general processes, aiming to provide a context in which each problem becomes integrated and easier to solve. In developing this discipline, we also aim to help various stakeholders apply insights, methods, and data science expertise to improve urban life on everything from infrastructure in informal settlements to air quality to human development.

Jordan Kemp, a physics doctoral candidate at the University of Chicago and research assistant at the Mansueto Institute, who is studying the dynamics of wealth inequality in complex physical and social systems.



Data visualization of locals' Twitter activity (blue) vs visitors' (red) in Kuala Lumpur. Credit: Eric Fischer / Mapbox Labs



Publications

Through our publications, we strive to create and amplify research that is helping to define the field of urban science, including new theory and methods for statistical analysis of cities, patterns of urban growth and development, and findings about socioeconomic, built environment, sustainability, and more. All papers are peer-reviewed and authored by Mansueto-affiliated researchers, postdoctoral fellows, or students. A full list is available at miurban.uchicago.edu/our-publications.

Working Paper Series

The Mansueto Institute's working paper series, hosted on SSRN, disseminates findings that are early-stage or under peer review to spur collaboration and publicize cutting-edge urban science research. Papers from scholars across the University of Chicago touch upon a range of interdisciplinary subjects, including housing scholarship, urban architecture and design, neighborhoods and human development, sustainable cities, and data and technological innovation. View the working paper series: ssrn.com/index.cfm/en/mansueto-institute-res.

Interdisciplinary Collaborations & Roles Supporting Urban Science & Practice

Interdisciplinary synthesis involving:

Better informed and accountable planning involving:

- Policy Makers
- Law Makers
- Think Tanks
- Urban Planners



- Biologists
- Sociologists
- Anthropologists
- Geographers
- Data Scientists
- Physicists
- Psychologists
- Urban Scientists
- Economists



Integrated practice articulating:

- Architects
- Civil Engineers
- Police Officers
- Mechanical Engineers
- Residents / Community
- Designers
- Social Workers
- Computer Engineers

Urban science encourages collaborations and knowledge co-production between scientists, policy makers and planners, and practitioners, including disadvantaged residents and local communities.

Visualizing Urban Science

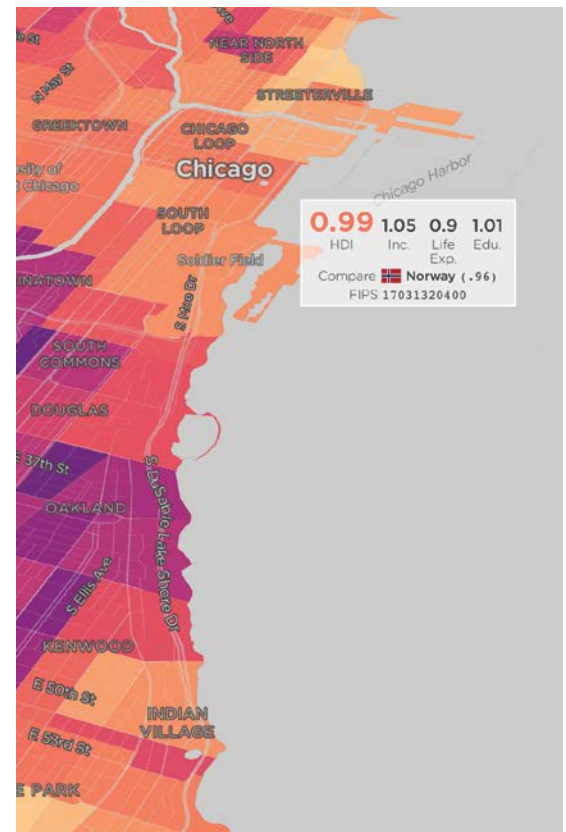
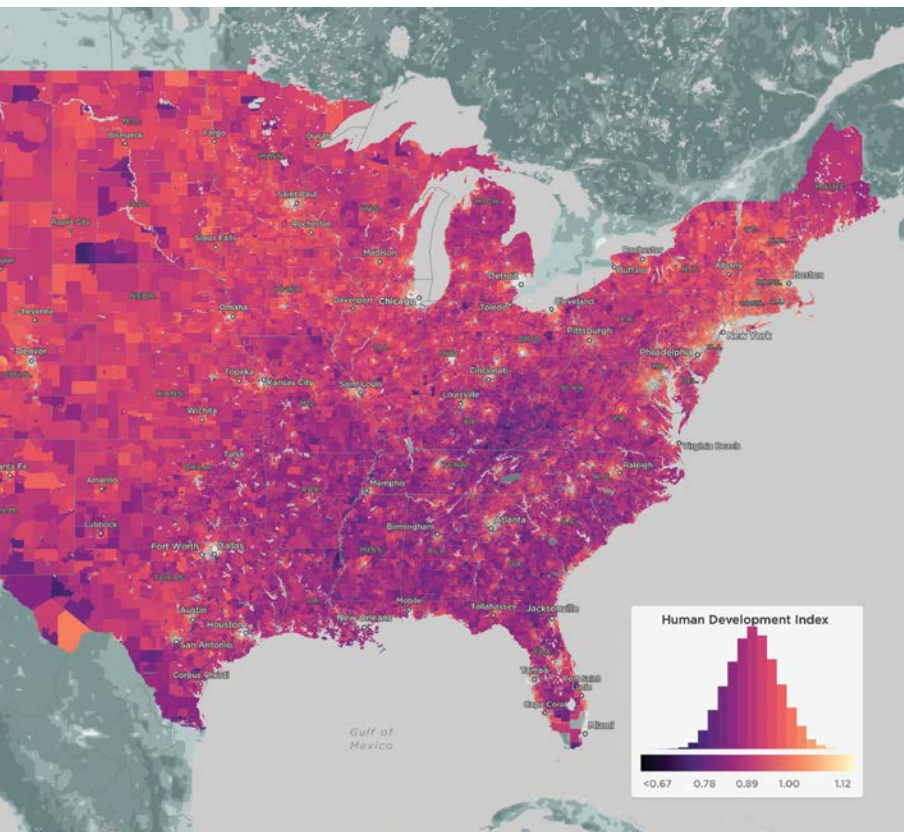
In addition to peer-reviewed publications and our working paper series, we also conduct and support independent, public-facing research projects that visualize data, methods, or processes in urban science. This growing portfolio combines traditional scholarship and data visualization to bring our work and perspective to a wider audience of scholars, policy-makers, and the curious public.

The Community Human Development Index benchmarks each census tract in the U.S. to the human development index of different nations.

COMMUNITY HUMAN DEVELOPMENT INDEX

The Community Human Development Index, (communityhdi.org) released in 2021, by Luis Bettencourt and Suraj “Neil” Sheth, a doctoral student in the Pritzker School of Medicine and the Department of Ecology and Evolution, allows users to view the gold standard measure of human development in every local community (census tract) in the United States. The human development index (HDI) is a statistic used by the United Nations and other international organizations that represents a composite of gross national income adjusted for cost of living, educational attainment, and life expectancy at birth. It is inspired by the capabilities approach to development, a conceptual framework that emphasizes human agency, and the importance of health and knowledge. It encourages measurement that is more holistic and human centered than a purely economic measure like gross domestic product. Yet, until now, HDI was used to compare nations, but not cities or local communities, because the statistic had not been calculated at the neighborhood level. The Community HDI does this for every census tract in the U.S. by analyzing new, available data on income, education, and life expectancy.

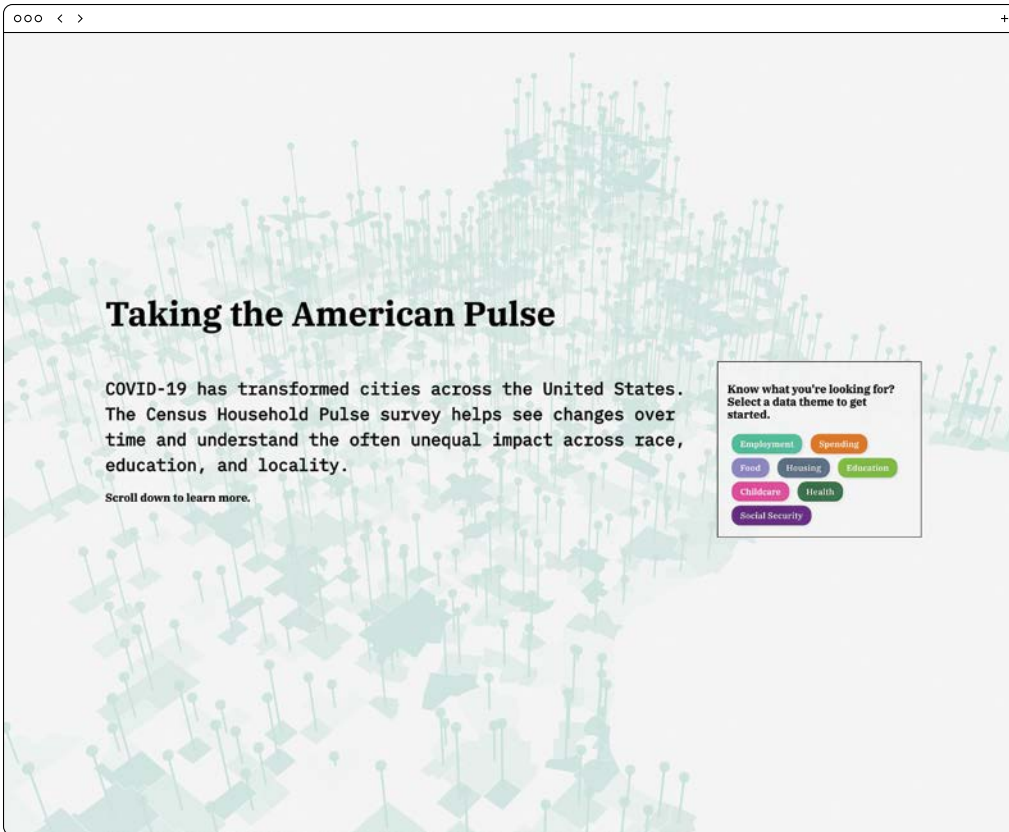
The index also benchmarks each community to a country’s HDI. For example, a census tract that covers the Gold Coast in Chicago has a larger HDI than Norway, while in Chicago’s Little Village Neighborhood, the HDI is approximately the same as South Africa. With this tool, researchers, community leaders, policymakers, and other stakeholders can be inspired to make human development a more prominent priority in urban development and devise more comprehensive approaches to practice and policy.



TAKING THE AMERICAN PULSE

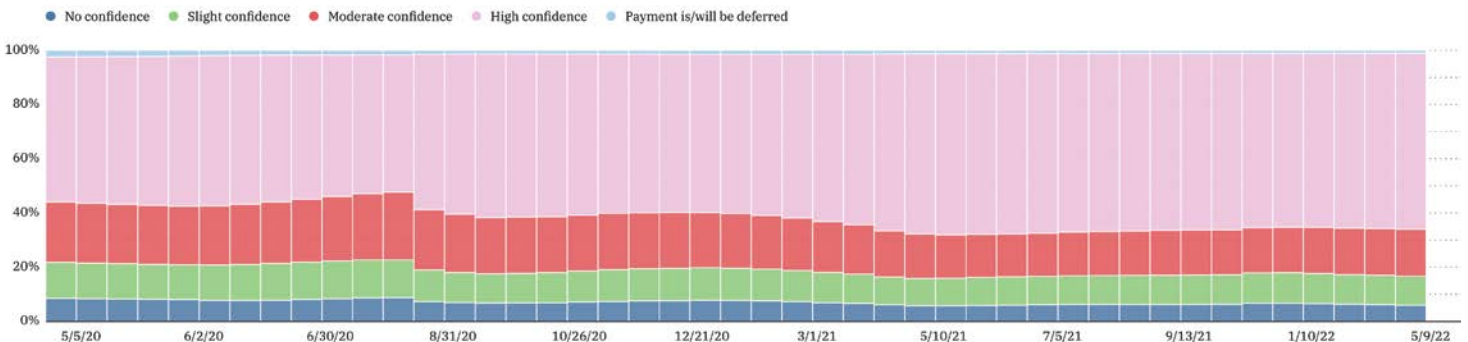
Working with the Center for Spatial Data Science, the Mansueto Institute released in 2022 an interactive data visualization tool called Taking the American Pulse (householdpulse.com), which enables users to explore and gain insight from newly released real-time U.S. Census data during the COVID-19 pandemic. The data comes from the Census Household Pulse survey, which has been conducted monthly since the start of the pandemic, and represents over 70,000 households across the country. Responses show how American households are experiencing

the pandemic in terms of education and childcare, mental health, food security, and spending, and allows breakdowns by demographics like education, race, and metropolitan area (city) over time. The tool—which was created by Nicholas Marchio, a data science at the Mansueto Institute, and Dylan Halpern, a software engineer with the Center for Spatial Data Science—is designed to help academics, community organizations, journalists, and the general public understand and advocate for innovative policy and view disparities on how the pandemic was experienced related to income, gender, education, race, and urban areas.



Taking the American Pulse helps users visualize real-time U.S. Census Data on socioeconomic conditions during the COVID-19 pandemic nationally and in different metropolitan areas.

How confident are you that your household will be able to pay your next rent or mortgage payment on time?

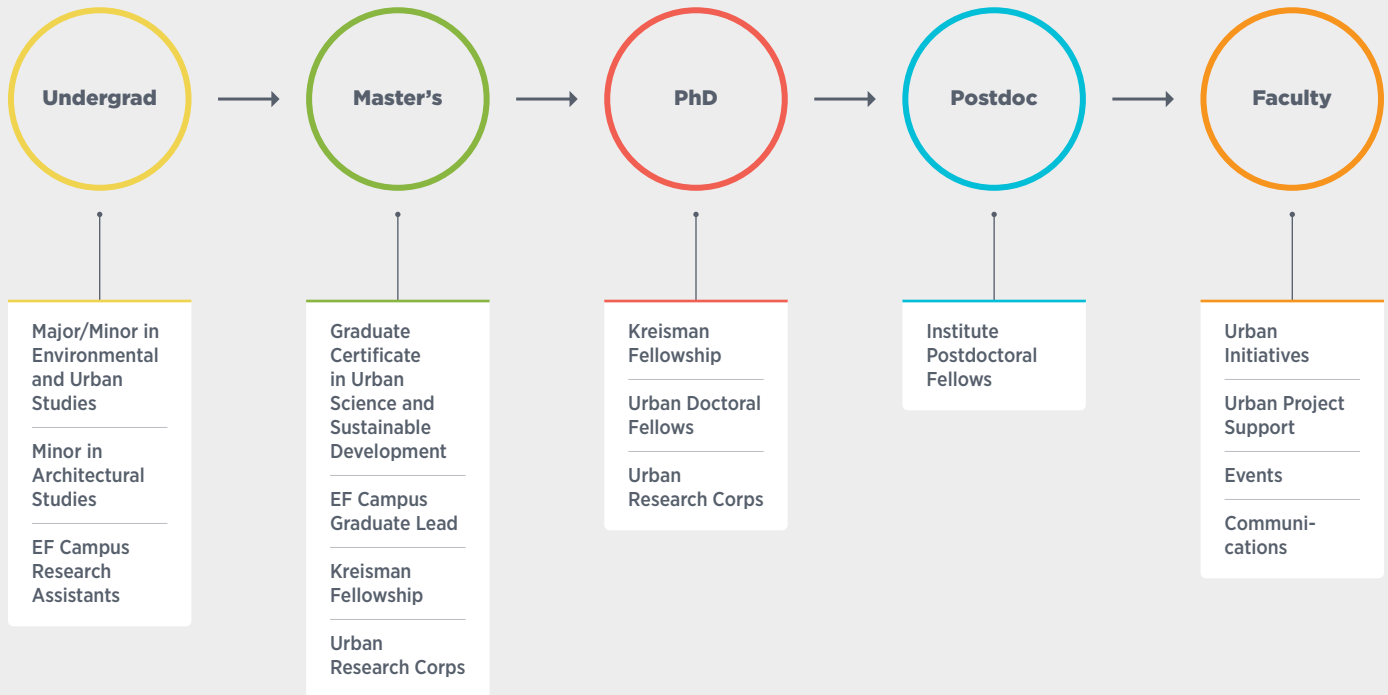


Creating an Urban Science and Scholarship Talent Pipeline

Entering a career in an urban field and making a difference in the world requires dealing with complexity and fast changing events. It demands training in a diversity of methods and skills, from interdisciplinary science, to data and computational analysis, to community engagement and person-centered policy and planning. To succeed, students need, and increasingly demand, education and training that prepares them to apply systems' thinking and methods, analyze vast sets of data, and co-produce knowledge and practice with a variety of organizations and constituencies.

A Pipeline of Talent

The Mansueto Institute has created an integrated pipeline of education and training for new scholars in urban science and practice and is pioneering an interdisciplinary approach to the study of cities and urbanization through a variety of programs spanning undergraduate, graduate, postdoctoral, and faculty levels.



The Mansueto Institute's undergraduate and graduate training programs, fellowship opportunities, and research assistant positions train students to embrace the complexity of cities, and the fast-changing challenges of a volatile world. Emphasis on the integrated social, economic, environmental, and physical processes that create and sustain cities helps students better understand change and harness it towards more sustainable and just futures.

Our students come from programs across the university, including art history, archaeology, business, economics, geography, public health, physics, public policy, and sociology. They share a common interest in cities as environments that dominate the human experience in the 21st century, in creating change, and in integrating disciplines and methods. We create a learning environment that brings together and challenges the confines of existing disciplines, immerses students in interdisciplinary theory and methods, and encourages rich conversation and inquiry. Students are exposed not only to the academy, but to alternate pathways for affecting change in philanthropy, corporate partnerships, and city government, and are prepared for futures conducting cutting edge urban research, or working in more applied areas such as housing, climate sustainability, and urban planning. Through this integrated model, the Mansueto Institute is training a new generation of scholars in urban science and pioneering an interdisciplinary approach to education and practice around cities.

Fellowship Programs

The Mansueto Institute attracts and supports exceptional early-career scholars who work in interdisciplinary ways, and bring powerful new ideas and methods into traditional scholarship and practice. The Mansueto Institute's fellowship programs are critical components of its mission to train the next generation of urban scholars and enrich the University of Chicago's vibrant community, as well as pioneer ambitious research agendas that deepen our understanding of cities, inform policy, and define the field of urban science.



More than stretching my curiosity and rounding my intellectual pursuits, my time at the Mansueto Institute was marked by its people and practice, a practice to research and learning that embraces the long view of science, is open, generous, and inclusive. Moreover, people made space and time and encouraged and challenged me to find my own voice and develop a language with which to articulate my own knowledge-making aspirations, and hold a space for others to pursue and articulate theirs.

—Annie Beukes

PHD CANDIDATE AND JUNIOR RESEARCHER
AT THE CENTER FOR DEVELOPMENT
RESEARCH (ZEF), UNIVERSITY BONN
AND FORMER INSTITUTE FELLOW

INSTITUTE POSTDOCTORAL FELLOWS

The Institute Postdoctoral Fellows program is a full-time academic appointment at the University of Chicago for early career scholars who share a common interest in urban research and come from a variety of disciplines, including anthropology, archaeology, architecture, data and computer science, law, medicine, physics, sociology, and public health. Fellows hold joint appointments in a University of Chicago school or department.

During their appointment, fellows are exposed and contribute to interdisciplinary, advanced methods, perspectives, and theory, along with technology, data, and scientific tools required to understand cities and urbanization in the 21st century. The experience culminates with a fellow-led academic convening or workshop on a theme of special strategic interest and potential in urban science or practice. By creating and hosting these convenings, our fellows step forward as leaders in the field, broadening the reach of the institute while elevating their individual standing at a pivotal moment in their career trajectory.

Postdoctoral fellows are at the core of the Mansueto Institute community, forging new links between the University of Chicago's units and disciplines while performing research that advances and defines the fields of urban science and sustainable urban development. By incentivizing cross-divisional collaboration in the recruitment of postdoctoral fellows, the Mansueto Institute has attracted innovative, emerging scholars to the university who might otherwise not have chosen to study within a particular department or divisional structure.

Since the program began through fall of 2022, we have had 86 total applicants, and 19 postdoctoral fellows, most of whom have gone on to academic appointments at institutions that include Cornell University, University of Southern California, the National Renewable Energy Lab, Leiden University, Em-Lyon Business School, and Bilkent University.

Fellows have held full-time academic appointments between the Mansueto Institute and the following University of Chicago academic units:

Department of Sociology

The OI

Department of Ecology and Evolution

Department of Anthropology

Knowledge Lab

Crown Family School of Social Work

Pritzker School of Medicine

Center for Spatial and Data Science



URBAN DOCTORAL FELLOWS

The Urban Doctoral Fellows Program provides a yearlong, supervised cohort experience for up to ten students who study aspects of cities and urbanization, to help them strengthen their writing and research, deliver effective presentations, and explore the boundaries of their chosen intellectual discipline. Each student produces a paper and talk throughout the year to present at a leading conference in their field, with travel and accommodation provided by the Mansueto Institute. Running over ten years and serving over 80 fellows, the program has brought together a broad array of research on cities, drawing students from across the university, including the Departments of Art History, Comparative Human Development, Economics, Evolutionary Biology, History, Political Science, Romance Languages, Sociology, and Sociocultural Anthropology; the Crown Family School of Social Work; and the Harris School of Public Policy. Fellows have presented their work at many diverse professional conferences and received awards from groups such as the American Sociological Association, the Urban Affairs Conference, and the National Academy of Education/Spencer Foundation.

Examples of Urban Doctoral Fellows' research topics:

- **Discrimination in public-goods access for disadvantaged groups in urban India**
- **Intersection of national and local politics in the governance and spatial organization of informal settlements in major urban centers**
- **Historic preservation, revitalization, and place-making**
- **Predicting school dropout rates in Chicago, New York City, and Philadelphia**

A New Urban Curriculum

Students wanting to understand and make a difference in the world, such as around challenges of climate change and rapid urbanization, increasingly demand a more holistic education across traditional disciplines, with modern methods and data. At the Mansueto Institute, we have responded by developing an integrated curriculum at the graduate and undergraduate levels that brings together a full range of disciplines in the social, natural, and computational sciences and humanities around the study of cities as systems. Working with a diversity of departments and programs across the university, our goal is to train students to better understand and work more productively in an increasingly complex world, and to create a model for training in urban science and sustainability that allows them to become leaders in careers at the heart of driving change in cities.

Students in the first graduating class of the Certificate in Urban Science and Sustainable Development.



GRADUATE CERTIFICATE IN URBAN SCIENCE AND SUSTAINABLE DEVELOPMENT

Recognizing a demand from graduate students across the university, the Mansueto Institute launched the Certificate in Urban Science and Sustainable Development in 2020. Taken in conjunction with existing master's or doctoral degree programs, the certificate establishes the scientific and intellectual underpinnings for a career in the emerging field of sustainable urban development. Bringing together the social sciences, mathematical modeling, data and computation, environmental sciences, and public policy, students are trained to connect urban and environmental change through systems' theory and methods, developing broad, powerful, and empirically-based expertise in processes of urban sustainable development. The program includes an end-of-year research project or professional opportunity, which students present at an annual faculty-juried symposium. Since it began, a total of 11 students have earned the certificate.

Student certificate project examples:

- Analyzing childhood respiratory illness and industrial pollution on Chicago's South Side
- Creating a policy road map for other municipalities to replicate Chicago's first-of-its-kind equitable transit-oriented development plan
- Analyzing whether San Francisco's pioneering zero waste program can be adopted by other cities
- Identifying best practices for water infrastructure financing methods to drive urban sustainability in Latin America
- Assessing transportation design failures to address women's safety in Karachi

MAJOR IN ENVIRONMENTAL AND URBAN STUDIES

The Mansueto Institute supported the development of a new urban track for the Environmental and Urban Studies undergraduate major and minor program at the University of Chicago. Run by the university’s Program on the Global Environment, the Environmental and Urban Studies program incorporates frameworks, theories, models, and methods from the humanities, social sciences, natural sciences, urban planning and design, and urban science. The urban track focuses on human interaction within the built environment, with Mansueto Institute director Luis Bettencourt teaching Introduction to Urban Sciences, one of the track’s foundational courses. Since the 2019-20 academic year, the number of students in the track has grown more than five-fold, from two students graduating in 2020 to 11 graduating in 2022. Additionally, the number of students enrolled in the major has doubled, and the number enrolled in the minor has more than tripled.

MINOR IN ARCHITECTURAL STUDIES

As an institute driven to create and accelerate new ideas at the University of Chicago, the Mansueto Institute has been a critical partner in the seeding of scholarly activity in architecture and urban design—two fields of study and practice that are not represented in the university’s schools and departments. Based in the Department of Art History, the interdisciplinary undergraduate minor in Architectural Studies equips students to analyze the form and changing history of the urban built environment through a combination of studios and coursework in architectural history. The minor can complement a major in the social sciences or humanities by exploring the material setting of history and social life or the context for works of literature, film, music, or drama; or it can complement a major in the sciences, such as medical fields, ecology, geology, physics, or mathematics. Students typically minor in architectural studies because they are interested in the built environment from a liberal arts perspective, or are considering applying to graduate studies at an architecture school.



A Textbook for Urban Science

Published in 2021 by MIT Press, *Introduction to Urban Science: Evidence and Theory of Cities as Complex Systems* by Luis Bettencourt, is used in the foundational seminar in the certificate program. The book describes a novel, interdisciplinary approach to understanding cities as complex, adaptive systems, going beyond existing theory in sociology, geography, and economics to articulate the emerging discipline of urban science. Bettencourt spoke at the Seminary Book Coop in October 2021 about the processes unleashed by urban life and how an urban science framework can be applied to develop innovative approaches to some of the most intractable issues cities face today, such as inequality, crime, and the climate crisis.

Environmental and Urban Studies Program Growth at the University of Chicago

NUMBER OF STUDENTS ENROLLED		NUMBER OF STUDENTS GRADUATED	
MAJOR	MINOR	MAJOR	MINOR
2017	30	2017	6
2018	37	2018	3
2019	43	2019	9
2020	51	2020	14
2021	58	2021	15
		2022	17
Total	219	Total	47

Experiential Learning

Recognizing the importance of exposure to practical experiences, the Mansueto Institute has created several programs for undergraduate and graduate students to gain professional experience in core areas related to cities and sustainability.

EF CAMPUS RESEARCH ASSISTANTS

Launched in Summer 2020 within the Environmental Frontiers initiative, EF Campus brings together faculty, students, and staff to build a more sustainable future on the University of Chicago campus and beyond. Supervised by a graduate student lead, undergraduate research assistants work in teams to analyze campus data, operational systems, and community behaviors and identify actionable recommendations to reduce the campus's energy use and improve its sustainability practices. All projects are aligned with the university's Sustainability Plan, and are mentored by academic faculty members at the Mansueto Institute, Center for Robust Decision-making on Climate and Energy Policy, and the Program on the Global Environment, as well as the university's Facilities Services staff. Students have analyzed the tree ecosystem around University of Chicago, laboratories' energy use, and buildings' water use, and made recommendations on conservation strategies. As of fall 2022, there have been a total of 25 student research assistants in the EF Campus program.

As an undergraduate, my time at the Mansueto Institute taught me invaluable lessons about how to operate within and across large, complex organizations. I worked on a laboratory energy use calculator, an effort which involved people from the Office of Sustainability, Facilities Services, and lab managers, to name a few. A crucial part of my work was aligning goals from diverse stakeholders, a skill which will undoubtedly help me in any career I choose moving forward. I'm very grateful for the technical and interpersonal mentorship I received, which has helped me become a more effective student and future employee.

— Shopnavo Biswas

UNIVERSITY OF CHICAGO '22,
BA ECONOMICS AND
STATISTICS, BS PHYSICS
AND MATH, AND FORMER EF
CAMPUS RESEARCH ASSISTANT



EF Campus students at the Arbor Day celebration in 2021, part of efforts to advance sustainability at the University of Chicago campus.



“The Kreisman Fellowship at the Mansueto Institute deepened my expertise in a wide range of housing and community development issues and provided me with valuable professional development experiences. The opportunity to build relationships with students interested in housing and urban issues from across graduate programs was one of the highlights of my time at the University of Chicago.”

— Ross Tilchin

ASSOCIATE DIRECTOR
OF ECONOMIC
MOBILITY AT RESULTS
FOR AMERICA
AND FORMER
KREISMAN FELLOW



“In my current role, I am a data scientist focused on electronic health record pediatric research at the Children’s Hospital of Philadelphia, where I regularly rely on my experience with Mansueto. One thing that stuck with me during my time as a Kreisman Fellow was the depth of the relationship between housing and health, which is a relationship that we often explore at Children’s Hospital of Pennsylvania (CHOP). We are currently working on a project investigating the relationship between neighborhood green spaces and asthma in Philadelphia, which is a project that I think would be equally at home at Mansueto.”

— Ryan Webb

DATA SCIENTIST AT
CHILDREN’S HOSPITAL OF
PENNSYLVANIA AND FORMER
KREISMAN FELLOW



Kreisman Graduate Fellows, a cohort of master’s and doctoral students interested in careers in housing.

KREISMAN FELLOWSHIP

The Kreisman Graduate Fellowship, which began in 2018 with the generous support of university alumnus David Kreisman, brings together an annual cohort of master’s and doctoral students from across campus interested in careers in housing. A partnership between the Mansueto Institute and the University of Chicago Law School, UChicago GRAD—the university’s graduate student career development office—and the Office of Civic Engagement, the one-year fellowship positions students to address interrelated systems of housing law and policy and helps them build a professional network focused on housing while learning from their peers. Fellows are exposed to problems of housing through networking events from leaders doing innovative work, in organizations such as the Chicago Department of Housing, Enterprise Community Partners, South Side Housing Data Initiative, and the Eviction Lab at Princeton University. By the end of the program, fellows complete a research project or internship supported by a stipend. The program has had a total of 37 fellows from across schools and programs at the University of Chicago.

URBAN RESEARCH CORPS

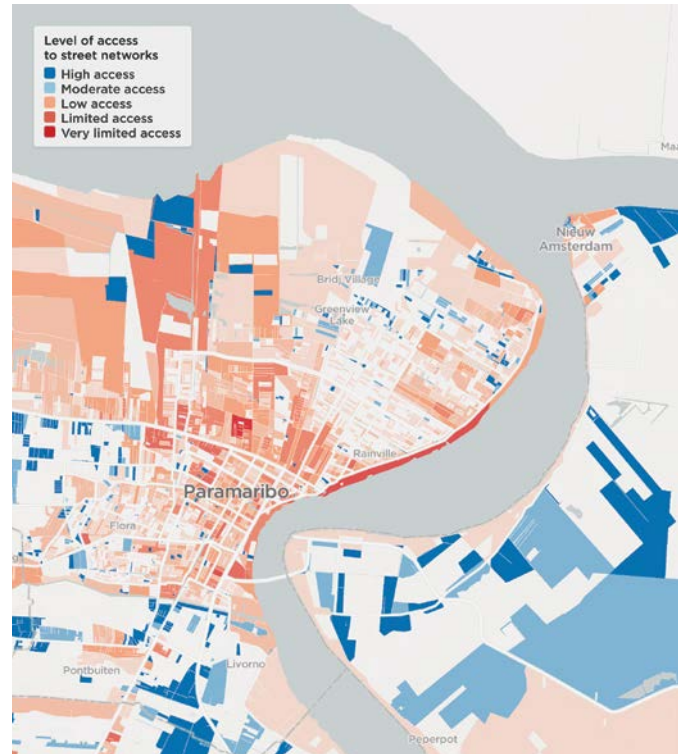
The Urban Research Corps provides University of Chicago undergraduate and graduate students with paid research opportunities applying data science to issues of cities and urbanization. Research assistants contribute to a range of Mansueto Institute initiatives, including mapping informal settlements and developing algorithms to improve street access in unplanned areas of rapidly urbanizing cities; examining how public transit, cars, bicycles, micro-mobility devices, and ride-hailing services affect the travel time to essential urban assets across neighborhoods; and creating a visualization of U.S. Census data on the COVID-19 experience in American cities. Students have gained practice co-authoring blogs and scientific articles, creating new analytical methods, participating in open-source tool development, creating software libraries, publishing new datasets, and participating in the release of public-facing interactive visualizations and web content. They are also encouraged and supported to present findings at events, meetups, or conferences.



“My experiences with the Mansueto Institute were fundamental to my time as a graduate student at the University of Chicago. They fostered my budding research interests throughout my thesis writing, and after graduation the institute gave me a home to build on that research alongside brilliant and exciting colleagues. The Mansueto Institute helped me build the skills and expertise for a life of urban science research and beyond!”

— Cooper Nederhood

MACHINE LEARNING SCIENTIST AT STRONG ANALYTICS AND FORMER URBAN RESEARCH CORPS FELLOW



Research assistants contribute to a range of Mansueto Institute initiatives, including mapping informal settlements and developing algorithms to improve street access in unplanned areas of rapidly urbanizing cities.

Since the program began, Urban Research Corps students have gone on to research positions and graduate programs in data science, including:

- Implementation Engineer at Recidiviz
- Researcher for the UChicago Justice Project
- Researcher at UChicago Crime Lab
- Data Scientist at Strong Analytics
- PhD candidate at University of California, Berkeley School of Information
- Data Scientist at Children’s Hospital of Philadelphia

A satellite view of the mapped image on the previous page, Paramaribo, Suriname.

NASA EARTH OBSERVATORY



Events & Media

The Mansueto Institute aims to create, discuss, and amplify big ideas and transformative solutions around cities and sustainability through regular events, popular science communication, and social media. In partnership with the University of Chicago, we engage both the scientific community and the larger public on fact-based perspectives about cities and urbanization and exciting new findings from urban science and scholarship.

Events

The Mansueto Institute hosts a variety of events, including talks, workshops, and major conferences that tackle themes of urbanization, sustainable development, and many other aspects of urban life. These events aim to connect a diversity of people working on urban issues to foster a space for the development of innovative ideas and holistic strategies.

MANSUETO COLLOQUIUM

The Mansueto Institute hosts biweekly talks during the academic year by scholars who share their findings on urban topics with our growing research community. Speakers have presented on diverse subjects, such as urbanization in China, air quality data collection in Chicago, and the impact of gentrification on inequality. In the spring, the institute's postdoctoral fellows give a colloquium talk as part of their appointment.

Colloquium on Biological Sciences and Climate Change

FEBRUARY AND MARCH 2022

Co-hosted with the Biological Sciences Division in February and March of 2022, the Colloquium on Biological Sciences and Climate Change featured cross-disciplinary talks on climate change and its impact on public health and ecosystems and biological diversity.

Alderman Daniel La Spata of the 1st Ward, Alderwoman Michele Smith of the 43rd Ward, and Alderman Matt Martin of the 47th Ward, on a panel about zoning reform in Chicago at the Kreisman Initiative Symposium in May 2022.



SYMPOSIUM & SPECIAL SPEAKER SERIES

The Mansueto Institute has hosted several large convenings around important and complex topics that benefit from the convergence of many different disciplines and perspectives.

Beyond the Single-Family Home: Zoning, Equity, and Access

KREISMAN INITIATIVE FOR LAW & HOUSING POLICY SYMPOSIUM

MAY 16, 2022

Supported by the Kreisman Initiative on Housing Law and Policy, the Mansueto Institute hosted a one-day event, "Beyond the Single-Family Home: Zoning, Equity, and Access." This first annual Kreisman symposium centered around exclusionary zoning practices in U.S. cities, like zoning for single-family homes over denser housing such as apartments, townhomes, and duplexes, and how it impacts housing affordability. Experts from Chicago and around the country in city government, housing organizations, design, and academia, shared strategies to address this complex problem, including how to create more dwelling units, change city and state laws, and mobilize communities. Learn more about the symposium at kreisman-symposium.event.uchicago.edu.

Obama Foundation Scholars at the Global Symposium on Sustainable Cities and Neighborhoods in October, 2019.

URBAN OCTOBER

In collaboration with UN-Habitat, and the University of Chicago's Urban Network, the Mansueto Institute has since 2019 brought together policy leaders, public officials, community members, and leading researchers from Chicago and around the world to focus on some of the most profound challenges facing global cities for urban-themed programming during the month of October. This has included:

Design and the Post-Pandemic City

OCTOBER 14, 2020

A discussion on blending design thinking with urban science to imagine the future of cities in a post-pandemic world, featuring designer Bruce Mau, co-founder and CEO of Massive Change Network; Luis Bettencourt; Tomoko Ichikawa, clinical professor at Illinois Institute of Technology Institute of Design; Dawveed Scully, associate at SOM; and moderated by Anne Dodge, executive director of the Mansueto Institute.

Global Symposium on Sustainable Cities and Neighborhoods

OCTOBER 23-25, 2019

Co-hosted with UN-Habitat, leading urban practitioners, community organizations, researchers, policy makers, and members of the business community discussed how neighborhoods around the world could come together around climate change, poverty eradication, and sustainable growth and development. The three-day symposium included a visit with Obama Foundation Scholars from around the world and panels on local approaches to sustainable development. It was also the launch of the first version of the Million Neighborhoods Map, a high-spatial-resolution map of informal settlements based on crowd-sourced data from Open Street Maps.



A Conversation on the Future of Cities with Carol Coletta, Luis Bettencourt, and Nicholas Negroponce, in 2018.

A Conversation on the Future of Cities

NOVEMBER 28, 2018

A conversation on tensions and opportunities between driving innovation in cities through technological advances versus community-oriented interventions, with Nicholas Negroponce, the founder of the MIT Media Lab, and Carol Coletta, a Senior Fellow at The Kresge Foundation's American Cities Practice.

Designing Re-entry for Women and Families

JUNE 27, 2018

A panel discussion with then first lady of New York City Chirlane McCray and the University of Chicago Institute of Politics fellow Nneka Jones Tapia, moderated by Alexa James, executive director of National Alliance on Mental Illness (NAMI), exploring the challenges that face incarcerated women and families, and innovative solutions taking place in New York City and Chicago.

EXTERNAL EVENTS

We have hosted and been featured at national and global conferences and other events, including:

MetroLab Summit

JUNE 1-3, 2022

MetroLab, a network of city-university partnerships, held their annual summit at the University of Chicago, hosted by the Mansueto Institute. Panels spotlighted collaborations between cities and universities to thoughtfully use technology to tackle issues like gun violence, climate resilience, and sustainable transportation.

Green City Day

MAY 13, 2022

The Mansueto Institute, together with Microsoft Research and the DuSable Museum of African American History, hosted Green City Day, an event to raise awareness around environmental health equity and provide local Chicago air quality data

to support local awareness and action. It was part of the Project Eclipse partnership between Microsoft's Urban Innovation Lab and the Mansueto Institute's Array of Things initiative, which in 2021 deployed over 100 low-cost air pollution sensors across the city of Chicago—believed to be the densest real-time air quality monitoring network in any North American city.

Norman Foster Foundation Masterclass

The Mansueto Institute developed a collaboration with the Norman Foster Foundation to advance the study of cities and the creation of sustainable urban solutions globally. Luís Bettencourt organized the On Cities workshop in 2019, bringing together leading architects and urbanists, as well as a select cohort of graduate students from around the world, focusing on urban informal settlements. He also created a video master class for the Foundation entitled “The Challenges and Opportunities of Cities” and a podcast on “The Social Essence of Cities.”

World Cities Summit

Luís Bettencourt was a keynote speaker at the World Cities Summit's Science of Cities Symposium in Singapore on July 31, 2022. The symposium brings together mayors and city officials from all over the world to discuss urban development and identify innovative emerging solutions. Bettencourt discussed smart cities and a complex systems approach to urban resilience and development as cities are confronted with interconnected challenges of climate change, changing demographics, ageing populations, and volatile local and global economic structures.

World Urban Forum

The Mansueto Institute has hosted discussion panels and presented its research and educational programs at the expo at the annual World Urban Forum, the premier global conference on sustainable urbanization, hosted by the United Nations' Human Settlements Program.

Green City Day raised awareness about air quality data in Chicago.



The Mansueto Institute at the 2020 World Urban Forum in Abu Dhabi.



SELECT MEDIA COVERAGE

- “Use Tech for City Planning but Leave Room for Innovation: World Cities Summit Panel” The Straits Times, August 2, 2022
- “New High-Res Satellite Imagery Gives the Clearest Picture Yet of the World’s Cities,” Next City, July 29, 2022
- “UChicago Focuses on the Future of Cities in a Post-COVID-19 World,” WTTW, October 5, 2021
- “The Bigger the City, the Lower the Depression Rates?” U.S. News and World Report, August 3, 2021
- “African Slum Map Exposes True Scale of Urban Poverty,” Reuters, October 23, 2019
- “Coronavirus In The U.S.: Where The Hotspots Are Now And Where To Expect New Ones” NPR, July 2, 2020
- “Chicago Coronavirus: Some Communities Where Essential Workers Live being Hit Hard By COVID-19 Infections and Deaths” ABC, May 21, 2020
- “Many Cities Around the Globe Saw Cleaner Air After Being Shut Down for COVID-19. But Not Chicago” Chicago Tribune, May 14, 2020
- “The Coronavirus May Hit Rural America Later—and Harder” Vox, March 28, 2020
- “Mapping Tech Could Formalize Settlements for One Billion People” Next City, March 18, 2020
- “Act Locally, Learn Globally: Luis Bettencourt on Building from the Community Up” The City Fix, January 14, 2020
- “Math Helps Sprawling Cities Grow Sustainably And Reduce Slum Conditions” Forbes, October 5, 2018
- “The Circular Economy Could Save Life on Earth – Starting with Our Cities” WE Forum, March 8, 2018
- “The City is Not a Massive Machine” Mint, September 9, 2017

WTTW CHICAGO *“People who live in cities, they need support. They need good services, good housing, good environments in which they can be healthy. They need conflict resolution. They need all kinds of things that allow them to interact with each other. And through those interactions create essentially the economic value (and the civic life of the city)... That is really what cities are about.”*

— Luis Bettencourt OCTOBER 5, 2021

WTTW CHICAGO *“You might think the weather in Chicago is the weather in Chicago, but the effects of climate change can be borne very differently from one neighborhood to another due to historical policies, land use, and the environmental exposures that are results of the economic system, the political system, and historical discriminatory practices.”*

— Sabina Shaikh OCTOBER 5, 2021

REUTERS *“Using this [million neighborhoods map], we can quickly identify the infrastructure deficits of entire cities and pinpoint areas most in need of improvements. The idea is that we will work with people on the ground in cities towards making plans that they think are appropriate.”*

— Luis Bettencourt OCTOBER 23, 2019

ABC NEWS *“The best preparation for a crisis like [the coronavirus pandemic] is working to improve local human development across communities within cities. So, that building resilience across communities can prepare us for the next crisis and the next pandemic and build a more inclusive community overall.”*

— Suraj “Neil” Sheth MAY 21, 2020

THE CITY FIX *“Cities are complex environments, yet Bettencourt says that what ails modern cities is fairly simple: ultimately, they are not responsive enough to people. Instead of the traditional model of large-scale master planning, he says cities should start at a smaller scale and gather data on the lived experiences of people at the individual, household, and neighborhood levels.”*

— Hillary Smith JANUARY 14, 2020

WORLD ECONOMIC FORUM *“A new World Economic Forum report showcases many emerging models for making the economy more circular—especially in cities—and points the way forward for how to evolve current economic systems into a comprehensive logic of sustainability. The key is decoupling economic growth and human development from resource extraction and waste generation.”*

— Luis Bettencourt MARCH 8, 2018

MINT *“In complex systems you ask: how does a city work? And that brings in ingredients from many of these fields as an interdisciplinary endeavour.”*

— Luis Bettencourt SEPTEMBER 9, 2017

Who We Are

The Mansueto Institute for Urban Innovation is a dedicated team of faculty and staff, working together to support an inclusive, diverse, and creative environment, where new rigorous ideas and approaches to research, education, and practice can be developed and thrive.

Staff

The Mansueto Institute staff manages the institute's academic programs, events, partnerships, data science, and communications:

Anne Dodge	EXECUTIVE DIRECTOR
Aimee Giles	EVENT SPECIALIST
Nicholas Marchio	RESEARCH DATA SCIENTIST
Heidi Lee	PROJECT ASSISTANT
Elaine Meyer	CONTENT SPECIALIST
Stephen Baker	URBAN DOCTORAL FELLOWS COORDINATOR



Mansueto fellows, researchers, and staff in the institute's office space.

Our Space

To help develop a culture of innovation, the Mansueto Institute has sought to create a new space designed to be open, playful, and collaborative. In 2021, the institute relocated to 1155 East 60th Street, part of the vibrant South corridor on the Hyde Park campus that includes the Harris School of Public Policy at the Keller Center; the David Rubenstein Forum; the Crown Family School of Social Work, Policy, and Practice; and the University of Chicago Law School. The institute renovated a space on the first floor of the building, creating a more modern, open floor plan with a lounge, community dining area, and conference space. These facilities are used to host meetings, collaborations, talks, and social events, in addition to serving as interdisciplinary work space. With these design improvements, the Mansueto Institute's new home also serves as a central place not only for urban research, training, and education but also as a convening point for kindred activities at the university, providing an open venue for faculty, staff, and students to work, collaborate, socialize, and host visitors.

Faculty Advisory Council

The Mansueto Institute consults regularly with a Faculty Advisory Council drawn from across the social sciences, natural sciences, and humanities to advance the institute's interdisciplinary research, help shape training, and grow urban-focused curricula at the University of Chicago.

Marc Berman

ASSOCIATE PROFESSOR,
Department of Psychology

INAUGURAL FACULTY DIRECTOR, CHAIR

Luís M. A. Bettencourt

PROFESSOR, Department of Ecology
and Evolution, Department of Sociology

Neil Brenner

LUCY FLOWER PROFESSOR
OF URBAN SOCIOLOGY,
Department of Sociology

Bill Brown

KARLA SCHERER DISTINGUISHED
SERVICE PROFESSOR IN AMERICAN
CULTURE, Departments of English
and Visual Arts and the Center for
the Study of Gender and Sexuality

James Evans

PROFESSOR, Department of Sociology;
DIRECTOR, Knowledge Lab;
FACULTY DIRECTOR, Master's Program
in Computational Social Science (MACSS)

Brodwyn Fischer

PROFESSOR OF LATIN AMERICAN
HISTORY, Department of History

Micere Keels

ASSOCIATE PROFESSOR, Department
of Comparative Human Development

Anup Malani

LEE AND BRENA FREEMAN
PROFESSOR OF LAW, University of
Chicago Law School and Professor,
Pritzker School of Medicine

Nicole Marwell

ASSOCIATE PROFESSOR,
Crown Family School of Social
Work, Policy, and Practice

Elisabeth Moyer

ASSOCIATE PROFESSOR,
Atmospheric Science, Department
of Geophysical Sciences

Mercedes Pascual

PROFESSOR, Department of
Ecology and Evolution

Sabina Shaikh

DIRECTOR, Program on the
Global Environment and Senior
Lecturer, Environmental and
Urban Studies in the College

Emily Talen

PROFESSOR OF URBANISM, University
of Chicago, Director of Urbanism Lab

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