

An aerial photograph of a residential neighborhood, showing a grid of streets, numerous houses with red roofs, and some green spaces. The image is slightly faded to allow text to be overlaid.

Mansueto Institute for Urban Innovation
University of Chicago

MIT Alumni Association
October 2021

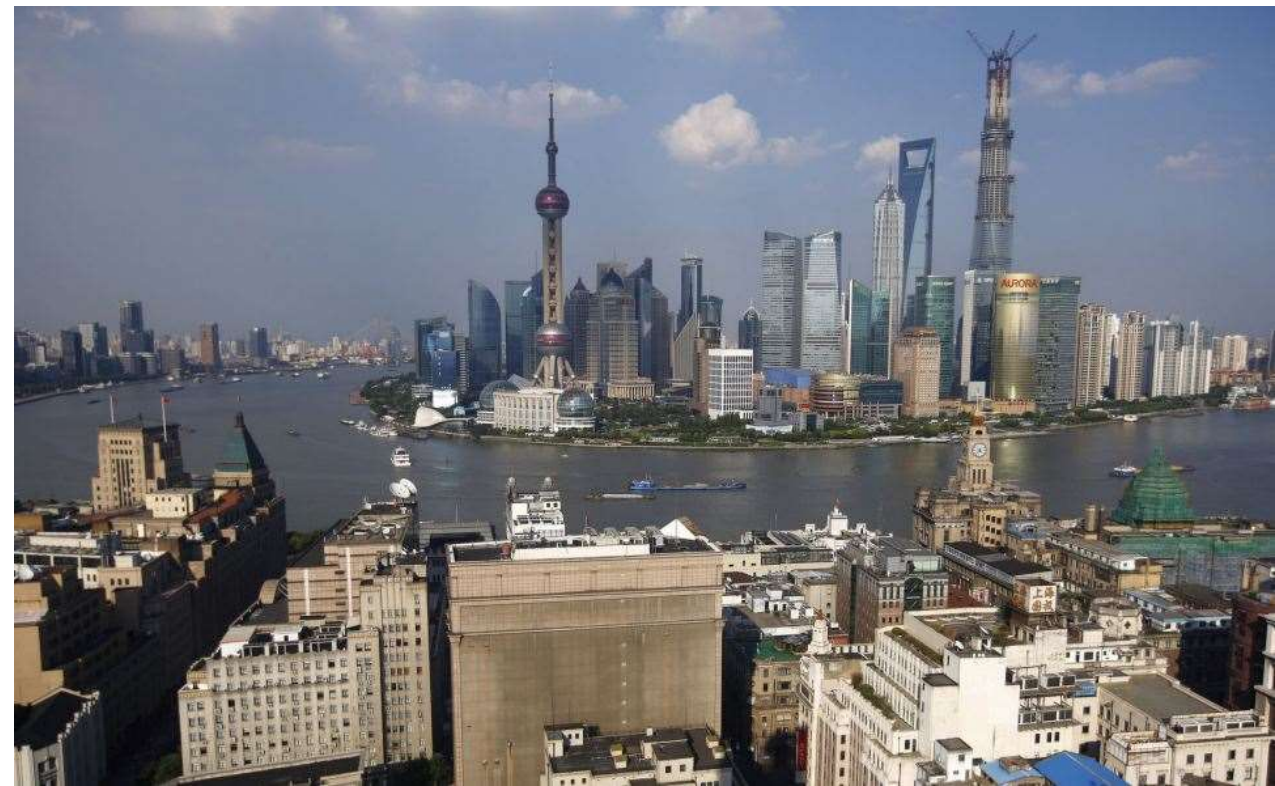


The Numbers

- There are 1M neighborhoods (1B people) in extreme poverty worldwide
- Mumbai, Delhi, Jakarta, Lagos will double in 18 years to become the largest cities ever ~ 50-60M people by 2050.
- There are now 5,000 cities with >100,000 people worldwide
- Cities occupy only 2% of land but account for 70% GDP and CO2 emissions



Shanghai, 1987



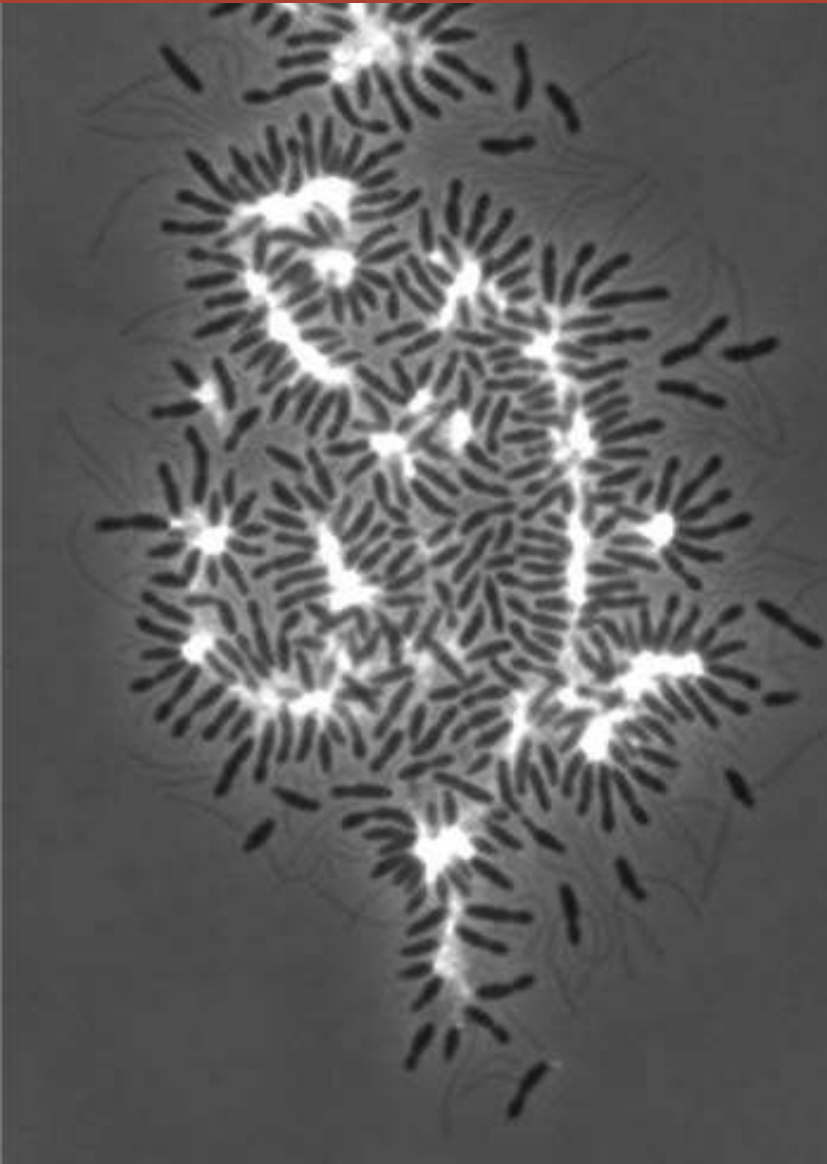
Shanghai, 2013



A New Science of Cities

1. **Discovering fundamental processes** that drive and sustain cities
2. **Field defining work** in the interdisciplinary realm of urban science
3. **International partnerships** with neighborhood impact
4. **Incubation** of new methods and ideas
5. Urbanization as **opportunity**







But how does it
work...
in practice?





People



Luis Bettencourt
Pritzker Director



Anne Dodge
Executive Director



Diana Petty
Associate Director



Nicholas Marchio
Research Data Scientist



Heidi Lee
Project Assistant



Kaamila Patherya
Marketing Intern



Stephen Baker
Urban Doctoral Fellows Coordinator

People



Mansueto
Institute Fellows



Kreisman
Graduate
Fellows



Urban Doctoral
Fellows



Initiatives



Advancing Urban Design through Innovative Research, Conceptualization, and Training



Building a Community of Scholars to Advance Housing Research and Practice



Applying Spatial Analysis to Drive Breakthroughs in Social Science



Exploring How Urban Landscapes Affect Human Cognition and Decision Making



Empowering Students to Create a Scientifically Robust, Sustainable Future



Creating Sensor Networks and Software Tools to Promote Health and Well-being in Cities



Tackling Human Societies' Greatest Challenges Neighborhood by Neighborhood



LANDSCAPE STUDIES IN THE NEAR EAST

May 10-11, 2019, Fri-Sat, 8:30am-5:30pm
 Held at Frankel Institute for the Humanities
 Regenstrein Library | Open to the public
ou.uchicago.edu/programs

THE NEXT 100 YEARS

THIS WORKSHOP, organized by the Center for Ancient Middle Eastern Landscapes (CAMEL), both generates the studies we have made in understanding ancient Near Eastern landscapes over the past century, and looks forward to the directions the field is going in future—or where it ought to go—geographically, methodologically, and theoretically. Concerned with Near Eastern landscape studies' disciplinary status and future, participants will be presenting ideas that are creative and forward-looking, and not get fully demonstrated on the ground. Topics include the environment and social change; integrative and widening large-scale datasets; the remote sensing and other technological, cultural, landscape and political ecology; landscape archaeology theory; modeling ancient settlement systems; and synthesizing historical and archaeological data.

PARTICIPANTS

- DAVID YONAH
 DANIEL DOBROTE, HERVE RECULEAU, AND JONAS ROYAN
- MAIL ABU-ASSEN
 UNIVERSITE EVRY
- JEAN-CHRISTOPHE ANTOINE
 UNIVERSITE JEAN MONNET
- JENNIFER BRADSHAW
 PENN STATE COLLEGE
- ALAN FARAHANI
 UNIVERSITY OF NEVADA, LAS VEGAS
- FRANK HANSEN
 UNIVERSITY OF PENNSYLVANIA
- SIMON HARTMANN AND PERI JOHNSON
 UNIVERSITY OF ILLINOIS AT CHICAGO
- MICHAEL HARTMANN
 JOHNS HOPKINS UNIVERSITY
- MATTHEW H. JOHNSON
 NORTHWESTERN UNIVERSITY
- CATHERINE KEARNS
 UNIVERSITY OF CHICAGO
- PEDRO LOURINCO-SILVEIRA
 UNIVERSITY OF CAMBRIDGE
- SHIMON MIZEL
 LUDWIG-MAXIMILIANS-UNIVERSITÄT MÜNCHEN
- CHRISTOPHER PHILLIPS
 DARTMOUTH UNIVERSITY
- HERVE RECULEAU
 UNIVERSITY OF CHICAGO
- MELISSA ROSENTHAL WIG
 NORTHWESTERN UNIVERSITY
- REBECCA SHERMAN
 HARVARD UNIVERSITY
- JACOB US
 HARVARD UNIVERSITY



AFTER THE PROJECTS
 Public Housing Redevelopment & the Governance of the Poorest Americans
 LAWRENCE J. VALE



Revisiting a Trailblazing Text: Robert Park and Ernest Burgess's *The City*

Panel discussion will explore the ongoing impact of this seminal work on the field of urban studies

with a foreword by
Robert J. Sampson

Robert E. Park
& Ernest W. Burgess

The City

**Thursday, April 4th
5pm-7pm**

**Regenstein Library, Room 122
1100 East 57th St., Chicago, IL 60637**

Reception opens at 5:00pm
with a panel discussion featuring
Robert J. Sampson at 6:30pm.

RSVP at
miurban.uchicago.edu/thecitypanel

Panelists:

Luis Bettencourt, *Pritzker Director, Mansueto Institute for Urban Innovation; Professor, Ecology and Evolution, University of Chicago*
Kathleen Cagney, *Associate Dean, Division of the Social Sciences; Professor, Sociology, University of Chicago*
Nicole Maxwell, *Associate Professor, School of Social Service Administration, University of Chicago*
Robert J. Sampson, *Hendy Ford Professor of the Social Sciences, Harvard University*
Robert Vargas, *Assistant, Marketing, Law, and Human City, Mansueto Institute for Urban Innovation; Professor, Political Science, University of Chicago*

with an introduction by

Daniel Diermeier, *Professor and David C. Stebbins Distinguished Service Professor at the Harris School and the College*
Amanda Woodward, *Dean of the Division of the Social Sciences and William S. Gray Distinguished Service Professor of Psychology*





Spring is here, and our Maps need blooming!

Mansueto Mapathon



Join the Million Neighborhoods Initiative by helping more than five hundred neighborhoods in Lagos and Freetown improve their maps.

Mapping can directly impact some of the most vulnerable populations in the world. Urban poor communities in the Global South are using maps from OpenStreetMap to improve their living conditions.

Help these communities by reviewing their map data in the second edition of the Mansueto Mapathon.

How the Mapathon works:

- Bring your laptop
- Review map data on OpenStreetMap
- Track the neighborhoods you've completed!

For a preview and tutorial of how OpenStreetMap works, visit miurban.uchicago.edu/mapathon

Friday, May 17
11am - 6pm
Searle Chemical Laboratory Suite 240B
5735 S Ellis Ave, Chicago IL 60637

Pizza will be provided.
 Come for an hour - come for the day!

No prior knowledge of mapping necessary. Only your laptop and enthusiasm!

Learn More and RSVP at miurban.uchicago.edu/mapathon






Initiatives


Learning and Engagement
Array of Things

Faculty Lead
Charlie Catlett
*Senior Computer Scientist,
Argonne National Laboratory*

Creating Sensor Networks and Software Tools
to Promote Health and Well-being in Cities


Scientific Research
Million Neighborhoods

Faculty Lead
Luis Bettencourt
*Professor, Ecology and
Evolution and the College*

Tackling Human Societies' Greatest
Challenges Neighborhood by Neighborhood



Node Components



Environmental Sensors

Air temperature, Humidity, Barometric Pressure, Vibration, Sound Intensity, Magnetometer



Air Quality Sensors

Nitrogen Dioxide, Ozone, Carbon Monoxide, Hydrogen Sulfide, Sulfur Dioxide



Light & Infrared Sensors

Light intensity, infrared (CLOUD COVER: SURFACE TEMPERATURE), camera, vehicle and pedestrian traffic. Images processed in-situ and discarded.



Linux Node Controllers

Image Processing Computer & System Health Manager and Control/Communications Computer

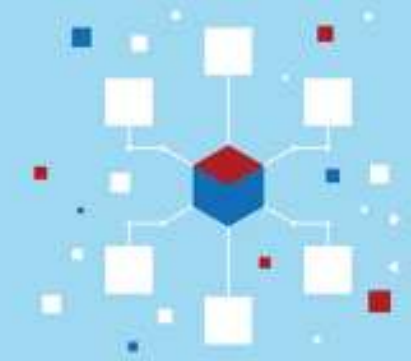


Node Power Manager

Node health monitoring and resilience functions



Argonne Server



Plenario, Open Data Portals, Dashboards, and Apps



Million Neighborhoods

[Continue explainer \(2/8\)](#)

[Play video](#)

Why street access

Streets connect each home or place of work to basic services. Without street access there is often no sanitation or clean water. There are also no addresses or routes for emergency responders, trash collectors, and buses.

Around the world, over a million neighborhoods lack adequate access to such services. We are mapping them here, block by block. Here is an example in Port-au-Prince, Haiti.

Explore a city

[Freetown, Sierra Leone](#)

[Monrovia, Liberia](#)

[Nairobi, Kenya](#)

[Dar-es-Salaam, Tanzania](#)

[Beira, Mozambique](#)

[Douala, Cameroon](#)

[Kinshasa, DR Congo](#)

[Blantyre, Malawi](#)

[Port-au-Prince, Haiti](#)

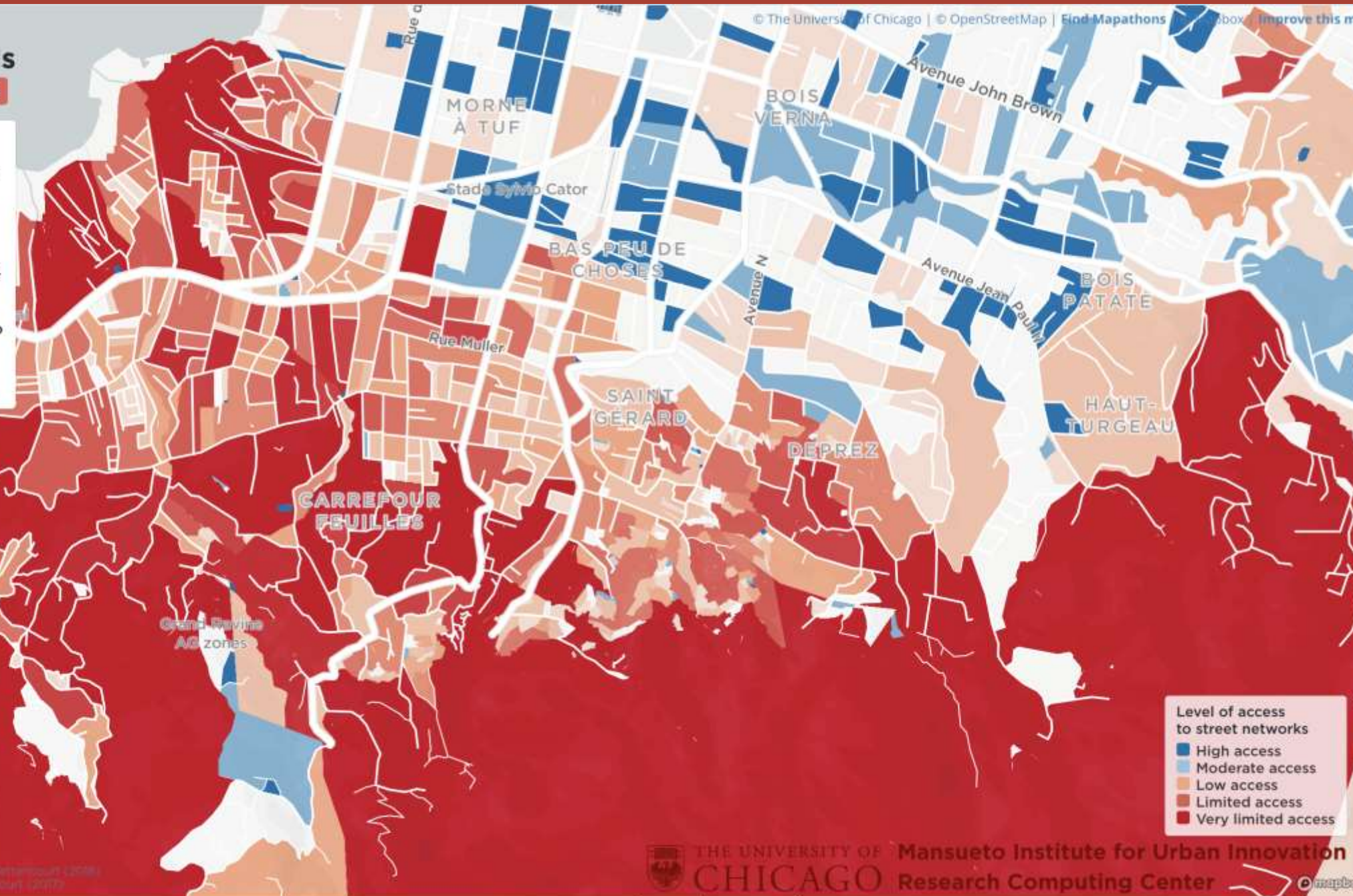
[Petare, Venezuela](#)

[Kathmandu, Nepal](#)



Methods:

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© The University of Chicago, Mansueto Institute for Urban Innovation (2017)



Level of access to street networks

- High access
- Moderate access
- Low access
- Limited access
- Very limited access



Tackling Human Societies' Greatest Challenges Neighborhood by Neighborhood

<p>1 NO POVERTY</p>	<p>2 ZERO HUNGER</p>	<p>3 GOOD HEALTH AND WELL-BEING</p>	<p>4 QUALITY EDUCATION</p>	<p>5 GENDER EQUALITY</p>
<p>6 CLEAN WATER AND SANITATION</p>	<p>7 AFFORDABLE AND CLEAN ENERGY</p>	<p>8 DECENT WORK AND ECONOMIC GROWTH</p>	<p>9 INDUSTRY, INNOVATION AND INFRASTRUCTURE</p>	<p>10 REDUCED INEQUALITIES</p>
<p>11 SUSTAINABLE CITIES AND COMMUNITIES</p>	<p>THE GLOBAL GOALS For Sustainable Development</p>			<p>12 RESPONSIBLE CONSUMPTION AND PRODUCTION</p>
<p>13 CLIMATE ACTION</p>	<p>14 LIFE BELOW WATER</p>	<p>15 LIFE ON LAND</p>	<p>16 PEACE AND JUSTICE STRONG INSTITUTIONS</p>	<p>17 PARTNERSHIPS FOR THE GOALS</p>



save the date
October 23-25, 2019
City of Chicago, IL



**Global Symposium on
Sustainable Cities and
Neighborhoods**





If you only take away one sentence:

**The Mansueto Institute is a hub for urban science,
dedicated to training the next generation of urban scholars.**



Thank you!

miurban.uchicago.edu