Penn IUR is a university-wide body that informs urban decision-making and public policy on issues of sustainable urban growth and development based on multi-disciplinary research, instruction, and outreach. As the global population becomes increasingly urban, understanding cities is vital to informed decision-making and public policy at the local, national, and international levels. Affiliated with all twelve schools of the University of Pennsylvania and with the world of practice, Penn IUR fosters collaboration among scholars and policymakers across disciplines to address the needs of an increasingly urbanized society. By providing a forum for collaborative scholarship and instruction at Penn and beyond, Penn IUR stimulates research and engages with urban practitioners and policymakers to inform urban policy.
In 2014, Penn IUR celebrated its first decade, which was marked by institutional growth and innovative research and programming.

During this year, Penn IUR hosted a series of tenth anniversary activities, the latter half of which are detailed in this report. In addition, Penn IUR initiated a broad effort to reflect on its work in the next decade. To this end, it engaged in an extended planning process with its stakeholders: Faculty Fellows, the Office of the Provost, the Penn IUR Advisory Board, the Penn IUR Executive Committee, Deans, and others. This outreach resulted in the development of its third strategic plan, *Building on a Decade of Growth, Penn Institute for Urban Research Strategic Plan 2015–2020*.

The strategic plan captures a critical point in Penn IUR’s development, a moment of opportunity to build on the work of the past decade and to shape Penn IUR’s future while maintaining and strengthening its core principle: fostering approaches that engage a wide community of academicians and practitioners in innovative, cross-sectoral, and multi-disciplinary urban research at Penn and beyond. The plan reaffirms Penn IUR’s mission and functional roles, refines its goals and objectives, takes stock of signature programs, and identifies emerging opportunities, providing a framework for strategic thinking and ongoing engagement for the next five academic years.

This annual report details Penn IUR’s accomplishments from July 2014 through June 2015 and looks ahead to future initiatives.

To download Penn IUR’s 2015–2020 strategic plan and this annual report, visit: penniur.upenn.edu/publications
A MESSAGE FROM THE PROVOST AND VICE PROVOST FOR RESEARCH

WE ARE PLEASED TO SHARE this 2014–2015 report, which documents Penn IUR’s work and marks the completion of another important year for the Institute and its communities.

Over its exciting first decade, we have seen the Penn Institute of Urban Research become an invaluable university-wide asset, whose members integrate knowledge across Penn’s twelve schools and advance critical research on topics both local and global. Penn IUR’s wide range of initiatives includes both long-running programs—such as the Undergraduate Urban Research Colloquium, Expert Roundtables, and Urban Leadership Award—and exciting new research in such areas as Land for Public Good in Emerging Economies, Urban Fiscal Stability and Sustainability, and Designing a Twenty-First Century Housing Finance System.

During this time, we have also witnessed the remarkable growth of Penn IUR’s community of scholars, practitioners, and students. Its eighty-nine Faculty Fellows, thirty-two Fellows, sixty-one Scholars, fourteen Emerging Scholars, and twenty-three associated doctoral students are making significant contributions to understanding urbanism across the globe. Many of them have also participated actively in Penn IUR’s important print and electronic publications, including the City in the 21st Century series with Penn Press, the SSRN Urban Research e-Journal, the Urban Link e-news digest, the Penn IUR White Paper Series on Sustainable Urban Development, and the interactive website Global Urban Commons.

We are proud that Penn IUR is devoted to one of Penn’s most vital missions: bridging the divide between research and practice. This year alone, Penn IUR convened researchers, practitioners, and policymakers at more than thirty research programs, expert meetings, and public events, which also provided opportunities for Penn’s urban-focused students at all levels to engage in urban research and learn from leading global experts.

We look ahead to Penn IUR’s second decade with great anticipation for what we are certain will be many more great insights and accomplishments for ever-evolving urban communities around the world.

VINCENT PRICE
Provost
Steven H. Chaffee Professor of Communication, Annenberg School for Communication
Professor of Political Science, School of Arts and Sciences

DAWN BONNELL
Vice Provost for Research
Henry Robinson Towne Professor of Engineering and Applied Science, School of Engineering and Applied Science

PENN INSTITUTE for URBAN RESEARCH
2014–2015 ANNUAL REPORT
A MESSAGE FROM PENN IUR’S CO-DIRECTORS AND ADVISORY BOARD CHAIR

A MESSAGE FROM PENN IUR’S CO-DIRECTORS AND ADVISORY BOARD CHAIR

THE 2014–2015 ACADEMIC YEAR marks a pivotal moment in Penn IUR’s development, with the Institution celebrating its tenth anniversary in 2014 and embarking on a new decade of discovery in 2015.

The accomplishments of the past year and decade would not have been possible had it not been for the many successful collaborations with Penn’s leading urban-focused faculty and students, distinguished experts from around the world, and supporters ranging from federal agencies and foundations to private individuals. Through these partnerships, Penn IUR serves as a home for interdisciplinary urban research that is rooted at Penn and has global impact. We are especially thankful to Penn IUR’s Advisory Board members for their commitment to growing the Institute into a sustainable university-wide entity while always thinking of new ways to innovate and address a wider range of issues facing the urbanizing world.

We welcome you to delve into this report and discover the many opportunities to engage with Penn IUR.
In 2014–2015, Penn IUR conducted and supported research to inform sustainable development in rapidly urbanizing places as well as in long-established cities, promoted and facilitated the exchange of best practices, and translated research for a diverse global audience.
LAND FOR PUBLIC GOOD IN EMERGING ECONOMIES

The recently issued World Urbanization Prospects (2014) confirmed earlier predictions that, by 2050, 66 percent of the world’s population (or 6.4 billion urbanites) will live in cities (this represents 2.5 billion more city-dwellers than today’s 3.9 billion). The demographic, economic, and environmental consequences of this phenomenon are enormous. Today, cities are responsible for 70 to 80 percent of the world’s GDP and for an equal percentage of greenhouse gas emissions. Finding ways to ensure that economic and population growth will occur efficiently, with shared prosperity, and in environmentally sensitive ways is the central question of twenty-first century urbanism.

Many visualize the hard-to-comprehend scale of urban growth with images of fast-growing African and Asian mega-cities like Lagos or Shanghai, but the phenomenon also includes small- to mid-size cities and growth in the peri-urban area of large cities. While 90 percent of future urban growth will take place in Asia and Africa (with much of it—37 percent—concentrated in Nigeria, China, and India), small- and medium-sized cities (with populations under 5 million), not megacities, will absorb the majority of new city-dwellers. These growing cities demand attention, as there is still time for them to adopt new, more sustainable forms of growth.

The undeveloped lands at the peripheries of these cities are the frontier, and the reversal of the proliferation of illegal subdivisions is the challenge. Such informal settlements—which in some cases may contain half of a city’s population—lack basic services such as water, sanitation, waste removal, electricity, and transportation.

To address this challenge, Penn IUR launched in 2015–2016 the two-stage Land for Public Good in Emerging Economies project with support from Advisory Board member Robert Stewart (W ’88). The project explores responses to rapid urbanization, including an examination of the sites-and-service approaches that were popular in decades past to explore the feasibility of re-envisioning this approach in order to create large, orderly, well-serviced land for anticipated urban development. The Penn IUR research team, which includes Penn IUR Co-Directors and Penn students, initiated the first stage—the landscape study—in Spring 2015. The team completed a literature review; conducted interviews of current and former officials from the World Bank, representatives of UN Habitat, and experts at development banks; and facilitated a student-led field survey of informal settlements. See pages 14 and 68 for more information on the students’ work.

The second stage, which will take place in 2015–2016, will envision a land for public good that, by 2030, will absorb the majority of new city-dwellers. These growing cities demand attention, as there is still time for them to adopt new, more sustainable forms of growth.

ENERGY SMART COMMUNITIES INITIATIVE

U.S. President Obama and Japanese Prime Minister Kan launched the Energy Smart Community Initiative (ESCI) in 2010. Managed by the Asia-Pacific Economic Cooperation’s Energy Working Group (APEC-EWG), the initiative provides information that will help APEC economies achieve their goal of reducing energy intensity (energy consumed per gross domestic product) by 45 percent by 2030.

Since 2011, Penn IUR, in partnership with the Taiwan Institute for Economic Research (TIER) and with funding from the National Development Council (NDC) of Taiwan, has developed and maintained an web-based knowledge-sharing platform, ESCI-KSP, that illuminates best practices and demonstration projects in energy efficient urban development, specifically in the in the domains of transportation, buildings, smart grids, green employment, and industry.

In 2014–2015, Penn IUR and TIER expanded the KSP to include a focus on industry and organized the second ESCI-KSP Best Practices awards to recognize exceptional demonstrations of best practices in energy efficiency across the study areas. The 2015 ESCI Best Practices Award winners will be honored at the 50th Meeting of the Energy Working Group in November 2015. Penn IUR continues to manage the ESCI-KSP and to make regular presentations at bi-annual EWG meetings.

For more information, visit: esci-ksp.org

See page 40 for an excerpt from “Comparison of the Development of Energy-Smart Communities Among APEC Members,” a Penn IUR report released in October 2014.
In Spring 2015, two students joined Penn IUR’s Undergraduate Urban Research Colloquium (see more on page 66) to learn research methods and to study land use issues in rapidly urbanizing places.

Mentored by Penn IUR Co-Director Eugenie Birch, the students identified 49 site and services projects throughout the developing world, analyzed their locations, designs, financing, and legal status, and evaluated their successes and shortcomings. Students concluded the semester-long project by developing recommendations for a twenty-first-century approach to rapid urbanization, pointing out the need for field research.

Anne Stack, a rising senior in the College of Arts and Sciences who is majoring in Architecture, took the project a step further. Stack, who comes from Harare, Zimbabwe, a city of 1.6 million population that is experiencing rapid development and has many informal settlements, including existing sites and services projects, designed with Professor Birch a field study. Below are her observations:

Zimbabwe has struggled through colonial oppression yet endeavored to become the breadbasket of Africa from the mid-twentieth century to the present. However, up to now it saw its currency hyperinfla with prices rising every hour and the economy change beyond recognition. It is a country where a small percent of the population owns a large percent of the wealth. With a total population of 13 million in 2001, 60 percent under the age of 24, and only gaining independence in 1980, Zimbabwe is a young country in most aspects with daunting changes to confront. One of which is its annual urbanization rate of more than a percent (compared to .9 percent for the world, .3 percent for the developed countries, and 1.5 percent for the developing countries).

Penn IUR’s Land for Public Good initiative afforded me the opportunity to do primary fieldwork on the Zimbabwean urban situation and understand how effective the sites-and-services method was in Zimbabwe. The first stage of the research project was to conduct an interview of the existing site and service settlements in Harare. I started by meeting with government housing officials, local architects and developers, NGOs and local housing organizations, and members of cooperatives and informal settlements. Each meeting was a new story and a new perspective that gave me a qualitative view on the complex network of politics, economy, and culture that shapes the Zimbabwean urban environment.

I started by meeting with government housing officials, local architects and developers, NGOs and local housing organizations, and members of cooperatives and informal settlements. Each meeting was a new story and a new perspective that gave me a qualitative view on the complex network of politics, economy, and culture that shapes the Zimbabwean urban environment.

In the study’s next phase, I will conduct a second survey that will focus on housing cooperatives, a pre-planned sites-and-services arrangement, to better understand the residents’ standards of living. The aim is to compare the conditions in Hatfield and Hatfield to see if different types of settlements have different effects on residents’ well-being.

I have been working with government ministries, local community workers, NGOs, and even a few Penn alumni. The experience has been difficult but extremely enlightening. Although the housing situation in the settlements is extremely challenging and many people live from hand to mouth, I have found people to be friendly and hardworking. Working closely with governing district officials, the Women’s Bureau, and Penn IUR, I hope to complete a study that will provide valuable information on the situations and needs of households so that improvements can be developed where they are so badly needed.
INDICATORS FOR URBAN SUSTAINABLE DEVELOPMENT

With funding from the Ford Foundation, Penn IUR developed the Sustainable Communities Indicator Catalog (SCIC) for the Partnership for Sustainable Communities (PSC), an alliance of three federal agencies: Housing and Urban Development (HUD), the Department of Transportation (DOT), and the Environmental Protection Agency (EPA). The SCIC is a web-based tool that enables communities to benchmark and track their progress toward the Partnership for Sustainable Communities’ Livability Principles.

With two years of development work from Penn IUR researchers behind it, the PSC launched the SCIC to the public in October 2014. In the spring of 2015, the Penn IUR team surveyed and analyzed SCIC usage by communities that had received PSC grants and provided the PSC with data to inform the ongoing maintenance and development of the database. Originally, to develop the SCIC, Penn IUR researchers consulted with a wide variety of stakeholders, evaluating over 100 community indicator initiatives across the United States and nearly 400 examples of indicators. The resulting database highlights thirty-one priority indicators and equity measures, describes how each relates to sustainability and provides instruction on its use and interpretation, and offers examples of its use in U.S. cities.

For more information, visit: sustainablecommunities.gov/indicators

See page 42 for an excerpt from “Measuring U.S. Sustainable Development,” a report by Eugénie L. Birch and published by Citiscape, on the results of this project.

SPATIAL INTEGRATION LABORATORY FOR URBAN SYSTEMS

The Spatial Integration Laboratory for Urban Systems (SILUS) is a research collaborative between Penn IUR, the Wharton GIS Lab, and the U.S. Geological Survey (USGS) that evaluates economic, natural resource, and environmental policy issues in an urban and regional setting. In the third year of this five-year initiative, the research team has examined the role cities can play in the preservation and development of urban ecosystem services.

Research in 2014-2015 assessed the role of green infrastructure in enhancing urban ecosystems as well as improving water quality. Officials from six innovative cities—including New York City, Washington, D.C., Portland (Oregon), Denver, Seattle, and Philadelphia—convened to discuss best practices in the management of green (rather than gray) infrastructure. SILUS, along with Penn IUR and USGS, convened the one-day roundtable to identify lessons-learned and to disseminate best practices. SILUS has issued “The Sustainable City: Science, Urban Ecosystem Services, and Green Infrastructure,” a report that summarizes the results of the Spring 2015 convening of policymakers, practitioners, and researchers from a range of disciplines on this topic. See page 52 for more information on this event.
Penn IUR has continued to grow and enhance its print and online publications and resources in order to translate research findings to varied and broad audiences. These efforts include The City in the 21st Century book series published by University of Pennsylvania Press—a collection of timely books addressing critical urban issues from around the world—and a variety of digital publications. The Social Science Research Network (SSRN)’s Urban Research eJournal, the Urban Link monthly e-news digest, and the Global Urban Commons website provide free online resources that highlight urban research and help create dynamic online networks for sharing and distributing new findings.
THE CITY IN THE 21ST CENTURY BOOK SERIES

Penn IUR’s Co-Directors Eugénie Birch and Susan Wachter edit the University of Pennsylvania Press’s The City in the 21st Century (C21) book series. This series, with twenty-nine published titles and four more in development, explores the depth and breadth of contemporary urban scholarship across a wide range of disciplines—anthropology, planning, sociology, economics, architecture, urban design, political science, and history—and represents a cross-section of scholarship and experience on the city in the twenty-first century across the developed and developing world.

A recent publication in the series is How Real Estate Developers Think: Design, Profits, and Community by Peter Hendee Brown. Published in April 2015, illuminates real estate developers’ perspectives, based on interviews with more than a hundred players from Chicago, Miami, Portland (Oregon), and Minneapolis and St. Paul. Brown examines the three perspectives from which developers operate: design, profits, and community. Brown profiles the careers of individual developers to illustrate the character of the entrepreneur and to examine the risks and rewards that motivate developers. Finally, he considers the roles played by innovation, design, marketing, and sales in the production of real estate. Overall, Brown portrays developers as creative visionaries who are able to imagine future possibilities for our cities and communities and shows that understanding them will lead to better outcomes for neighbors, communities, and cities. Brown explains the interests, motives, and actions of real estate developers using case studies to show how the basic principles of development remain the same everywhere even as practices vary based on climate, local culture, and geography. An understanding of what developers do and why they do it will help community members, elected officials, and others participate more productively in the development process in their own communities. For an excerpt from this book, see page 38.

The University of Pennsylvania Press publishes its volumes in hardback, paperback, and electronic versions. Last year, it reprinted four volumes in paperback: Miami Transformed: Rebuilding America One Neighborhood, One City at a Time by Manny Diaz with a foreword by Michael Bloomberg (also now available in Spanish); Global Downtowns edited by Marina Peterson and Gary McDonough; Design After Decline: How America Rebuilds Shrinking Cities by Brent D. Ryan; and The American Mortgage System: Crisis and Reform edited by Susan M. Wachter and Marvin M. Smith.

“How focusing on imaginative and experienced development professionals working in complex urban settings, Brown usefully problematizes the monolithic idea of the ‘greedy developer.’ By helping readers to see how these more sophisticated developers think, this engagingly written book can do much to help move real-world situations from hostile standoffs to informed conversations.”

—ANN FORSYTH, HARVARD GRADUATE SCHOOL OF DESIGN
The C21 series includes the following titles:


1. Roger D. Abrams with Nick Spitzer, John F. Swed, and Robert Harris, "Blues for New Orleans: Mardi Gras and America's Creole Soul" (HC, PB, 2013)
2. Elijah Anderson with a foreword by Cornel West, "Young, Black, and Male" (HC, PB, 2011)
3. Edward J. Blakely with a foreword by Michael Bloomberg, "Manny Diaz with a foreword by Martha J. Derthick; Miami: Transforming Rebuilding America One Neighborhood at a Time" (HC, PB, 2012)
5. Michael B. Katz, "Why Don't American Cities Burn?" (HC, PB, 2011)
7. Martin Krieger, "Urban Tomographies" (HC, PB, 2011)
10. Margaret Dewar and June Manning Thomas, editors, "The City After Abandonment" (HC, PB, 2011)
11. Naomi Carmon and Susan Fairstein, "How Place Matters in Modern America" (HC, PB, 2011)
12. Laura W. Parsee, editor, "Preparing Today's Students for Tomorrow's Jobs in Metropolitan America" (HC, PB, 2011)
13. Laura W. Parsee, editor, "Preparing Today's Students for Tomorrow's Jobs in Metropolitan America" (HC, PB, 2011)
15. Judith Rodin, "The University and Urban Revival: Out of the Ivory Tower and Into the Streets" (HC, PB, 2011)
16. John Timoney with a foreword by Tom Wolfe, "Best Cop to Top Cop: A Tale of Three Cities" (HC, PB, 2011)

In addition, during 2014–2015, Penn IUR has published books in the C21 series:

- Laura W. Parsee, editor, "Preparing Today's Students for Tomorrow's Jobs in Metropolitan America" (HC, PB, 2011)
- Marina Peterson, "Sound, Space, and the City: Civic Performance in Downtown Los Angeles" (HC, PB, 2011)
- Judith Rodin, "The University and Urban Revival: Out of the Ivory Tower and Into the Streets" (HC, PB, 2011)
- John Timoney with a foreword by Tom Wolfe, "Best Cop to Top Cop: A Tale of Three Cities" (HC, PB, 2011)
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This growing white paper series welcomes working papers from researchers across Penn’s campus who are exploring issues confronting cities around the globe. This year, Eugénie Birch released “From Science Parks to Innovation Districts: Research Facility Development in Legacy Cities on the Northeast Corridor” (June 2015). In this paper, Birch explores the spatial aspects of university-led R&D in legacy cities in the Northeast Corridor. The paper provides an overview of the U.S. R&D enterprise, describing the position and character of university R&D; reviews the university-based research in technology parks, a spatial arrangement developed in the 1960s that is still evolving; offers a case study of Philadelphia and the University of Pennsylvania, representing several models of spatial development of university-led R&D spanning from the 1960s to the present; and discusses other universities and their evolving approaches to accommodating research in their neighborhoods with examples from Boston/Cambridge (Harvard), New York (Columbia and Cornell), and Baltimore (Johns Hopkins). See page 28 for an excerpt.

For this white paper and others in the series, visit: penniur.upenn.edu/publications

The Global Urban Commons (The Commons) is a dynamic, web-based resource that identifies, connects, and supports a worldwide urban research community. Launched in the fall of 2014 with support from the Rockefeller Foundation, Penn IUR upgraded and expanded the site in the spring of 2015 with support from the University of Pennsylvania Press. It now includes a searchable database of more than 220 member organizations, sections on research and resources, and a global events calendar. Penn IUR updates the site weekly with contributions from around the world. The Commons serves as a platform for global outreach, including for example, the lead up to the United Nations’ Habitat III Conference in October 2016.

The Global Commons has a seventeen-member Advisory Board of distinguished international researchers who include:

Eugénie Birch, Co-Director, Penn IUR
Monica Brezzi, Head, Regional Analysis and Statistics Unit, Organisation for Economic Co-operation and Development (OECD)
William Cobbett, Director, Cities Alliance
Yongheng Deng, Provost’s Chair, Professor of Real Estate and Finance, Director, Institute of Real Estate Studies, Head, Department of Real Estate, National University of Singapore
Gilles Duranton, Dean’s Chair in Real Estate Professor and Chair, Department of Real Estate, The Wharton School, University of Pennsylvania
Vernon Henderson, Professor, London School of Economics
Mark Alan Hughes, Professor of Practice, Department of City and Regional Planning, Faculty Director, Kleinman Center for Energy Policy, School of Design, University of Pennsylvania
Abha Joshi-Ghani, Director, Knowledge and Learning Department, The World Bank Institute
Kyung-Hwan Kim, Professor, School of Economics, Sogang University, President, Korea Research Institute for Human Settlements; Korea’s Vice Minister for Land and Infrastructure
Stephen Malpezzi, Professor of Real Estate and Urban Land Economics, Wisconsin School of Business, University of Wisconsin-Madison
George McCarthy, President and CEO, Lincoln Institute of Land Policy
Sue Parnell, Professor, African Centre for Cities, University of Cape Town
Bimal Patel, President, CEPT University
Aromar Revi, Director, Indian Institute for Human Settlements (IIHS)
Saskia Sassen, Robert S. Lynd Professor of Sociology, Columbia University
Susan Wachter, Co-Director, Penn IUR
Anthony Yeh, Chair Professor and Head, Department of Urban Planning and Design, The University of Hong Kong

For more information, visit: globalurbancommons.org

The Global Urban Commons invites visitors to explore more than 220 research centers around the world.

ABOVE: The Global Urban Commons invites members to explore more than 220 research centers around the world.
Building Capacity for Research Among Universities Along the Northeast Corridor

Across the Northeast Corridor (NEC), universities and their associated medical centers generate a substantial number of jobs, have multi-million and in some cases multi-billing dollar operating and capital budgets, attract billions of dollars in government-sponsored research grants, private donations, and federal funds in the form of Medicare payments or student loans, and stimulate local spending through their own purchases as well as through expenditures by visitors and students. Figure 17 illustrates the number of universities and associated medical centers generating a substantial number of jobs across the Northeast Corridor. As structured, federal grants have had (and continue to have) a large impact on the spatial development of universities and their surroundings. They not only attract highly valued knowledge workers and their families but also fund the researchers’ salaries, including personnel that assist in the lab and help fund the researchers’ salaries. With annual expenditures reaching nearly half a trillion dollars, the United States leads the world in funding R&D. These expenditures, which have grown dramatically since the mid-20th century, have contributed to the nation’s economic transition from an industrial mix to another that is growth in GDP. While the private sector provides the majority of R&D funds, national government agencies—notably the Departments of Defense, Health and Human Services, and Energy—contribute nearly a third of the total, half of which goes to universities engaged in basic research. Although nearly a thousand institutions of higher education receive federal research grants, a smaller number are highly active and within this group, ten universities receive 40% of the total outlays. Six of these ten are in cities and three—Columbia, Penn, and Johns Hopkins—are in the Northeast Corridor. As structured, federal grants have had a significant and lasting impact on the spatial development of universities and their surroundings. They not only fund the researchers’ salaries, including personnel that assist in the lab but also pay for laboratories and other facilities in which the researchers work.

Conclusion

With annual expenditures reaching nearly half a trillion dollars, the United States leads the world in funding R&D. These expenditures, which have grown dramatically since the mid-20th century, have contributed to the nation’s economic transition from one industrial mix to another that is growth in GDP. While the private sector provides the majority of R&D funds, national government agencies—notably the Departments of Defense, Health and Human Services, and Energy—contribute nearly a third of the total, half of which goes to universities engaged in basic research. Although nearly a thousand institutions of higher education receive federal research grants, a smaller number are highly active and within this group, ten universities receive 40% of the total outlays. Six of these ten are in cities and three—Columbia, Penn, and Johns Hopkins—are in the Northeast Corridor. As structured, federal grants have had a significant and lasting impact on the spatial development of universities and their surroundings. They not only fund the researchers’ salaries, including personnel that assist in the lab but also pay for laboratories and other facilities in which the researchers work.

These latter kinds of expenditures are relatively straightforward and may be used by research parks, university- and private-sector research, and universities—public- and private-sector research, they tend to be single use and auto-dependent. Eighty-five are in existence today. Recently, more universities are fostering a new brand of development, the innovation district. Located in cities, featuring walkability and containing a mix of land uses including housing, office, and retail, innovation districts have contributed to the nation’s economic transition from an industrial mix to another that is growth in GDP. While the private sector provides the majority of R&D funds, national government agencies—notably the Departments of Defense, Health and Human Services, and Energy—contribute nearly a third of the total, half of which goes to universities engaged in basic research. Although nearly a thousand institutions of higher education receive federal research grants, a smaller number are highly active and within this group, ten universities receive 40% of the total outlays. Six of these ten are in cities and three—Columbia, Penn, and Johns Hopkins—are in the Northeast Corridor. As structured, federal grants have had a significant and lasting impact on the spatial development of universities and their surroundings. They not only fund the researchers’ salaries, including personnel that assist in the lab but also pay for laboratories and other facilities in which the researchers work.

Finally, the brief survey of how four other Legacy Cities. While many unknowns remain, this paper seeks to demonstrate the importance of institutional and collective roles on the future of research and development in Legacy Cities. While many unknowns remain, this paper seeks to demonstrate the importance of institutional and collective roles on the future of research and development in Legacy Cities.
This year, Penn IUR led and supported research initiatives that resulted in several types of publications: books, refereed journal articles, and reports. Following are excerpts from these publications which explore Penn IUR’s three focus areas: informing the sustainable and inclusive twenty-first-century city, fostering innovative urban development strategies, and illuminating the role of anchor institutions in urban places.
SOCIOECONOMIC MOBILITY IN THE UNITED STATES: NEW EVIDENCE AND POLICY LESSONS

Since the eighteenth century, the United States has been hailed as a “land of opportunity,” a society where all children can succeed, regardless of their family background. However, modern empirical research reveals that the rate of upward income mobility in the United States is actually lower than in many other countries (Corak 2013; Boserup et al. 2013).

Improving opportunities for children from disadvantaged families to succeed should be a priority for policy makers not just because it is one of the core principles of American society but also because improving mobility can have substantial economic payoffs. Unlike other policy issues that involve sharp tradeoffs, increases in absolute upward income mobility can benefit everyone in society. Children from disadvantaged backgrounds naturally benefit directly from having higher levels of income. But affluent individuals can benefit as well, because income growth among the least affluent members of society contributes to economic growth and reduces the number of individuals receiving transfers from the government, saving taxpayers money.

In the United States as a whole, chances of moving up in the income distribution relative to their parents for children entering the labor market today are similar those for children born in the 1970s. While mobility has been stable over time, there are stark differences in opportunities for upward economic mobility across communities in the United States. Cities such as Salt Lake City and San Jose exhibit levels of mobility similar to those observed in developed countries with the highest level of intergenerational mobility, while other cities such as Charlotte and Atlanta have lower levels of mobility than any country for which data have been analyzed to date. The large differences in intergenerational mobility across space point to the potential value of policies that target the five key community-level characteristics correlated with differences in mobility across areas: segregation, income inequality, school quality, social capital, and family structure.

The large differences in intergenerational mobility across areas of the United States create an opportunity and a challenge. The fact that some areas within America have greater social mobility than most other countries in the world demonstrates that we have an opportunity to greatly improve social mobility in the United States. If we can make each city in America like San Jose or maybe even Dubuque, Iowa—where a remarkable 17 percent of children born to the lowest-income families reach the very top of the U.S. income distribution—we would transform American society.

The challenge for researchers is to identify exactly what causes differences in social mobility across space, in order to be able to develop interventions to improve mobility. The challenge for practitioners is to implement those policy changes and make them politically and practically feasible. Overcoming these challenges could dramatically change social mobility in the United States and create opportunities for success for every child from Charlotte to San Jose.

See publication for full references.
WHY CITY PENSION PROBLEMS HAVE NOT IMPROVED, AND A ROADMAP FORWARD

JOSHUA D. RAUH


“WHY CITY PENSION PROBLEMS HAVE NOT IMPROVED, AND A ROADMAP FORWARD

IN THE AFTERMATH OF THE 2009 FINANCIAL CRISIS, large unfunded pension liabilities emerged in the reported accounts of U.S. state and local governments. Studies by the Pew Charitable Trust, among other sources, estimated that the unfunded liabilities were around $1 trillion at the state level and around $100 billion at the city level (Pew Charitable Trust 2010, 2013).

Using default-free discounting procedures consistent with the principles of financial economics, and relying on market values (as opposed to smoothed actuarial value) of assets, Novy-Marx and Rauh (2011a, 2011b) calculated considerably larger unfunded state pension liabilities of $2.5 trillion and unfunded city and county liabilities of $574 billion. These calculations measure the value of pension promises as streams of cash flows that must be paid regardless of market performance. While these mark-to-market gaps had widened during the financial crisis, they existed even before the 2008 downturn in equity markets (Novy-Marx and Rauh 2008).

Since 2009, there have been dramatic recoveries in the valuations of the stock market and other risk asset classes such as private equity and real estate. Indeed, the S&P 500 rose in value by 75 percent over this period, and most pension funds achieved annualized returns of well over their assumed rates of return, which were in the range of 7.5 to 8.5 percent per year. Some cities and states undertook reforms to their pension benefit structures and received considerable media attention for doing so, notably the state of Rhode Island and the cities of San Diego, San Jose, and Atlanta. Given these structural and market changes, one would assume the typical local government’s unfunded liability would have seen substantial reductions.

Using liability measurements from the pension systems themselves, which are prepared under Governmental Accounting Standards Board (GASB) techniques, I find a growth in the absolute level of unfunded pension obligations. This is remarkable as the assets of all the systems are heavily invested in risk assets that enjoyed a dramatic resurgence in value over the 2009–13 period. The salutary effects of these strong investment returns were offset as liabilities continued to rise and benefit payments continued to outstrip contributions. This rise in liabilities is equally remarkable given that public pension liabilities have been a central theme of public discourse in many cities for the past several years.

In light of the fact that unfunded liabilities have grown even during an extremely robust period for equity markets, which was also a time when local governments were under pressure to reform their systems, the chapter outlines policy options available to cities.

See publication for full references.
A CALL FOR TRANSPARENCY

Decisions made today in ignorance of future costs cannot be undone. The first step, therefore, must be to make informed decisions possible. Transparency is a necessary foundation for the important task of putting our urban economies back on sound fiscal footing. The lack of public knowledge of the full extent of obligations enables kick-the-can-down-the-road postponement of necessary decisions. Rather than putting into place incremental solutions that work to resolve indebtedness over time, the result may be that no good solution is possible. While crises can lead to clear thinking about alternatives, in this case, crisis means that all parties—pension holders, taxpaying citizens, and debt holders—are worse off, the sad lesson learned from Detroit and Greece. Once the problem of unfunded liabilities brings a city to the point of financial crisis, there is no going back. The city itself will have to cut back on necessary investment for future growth. This hurts all parties but may be inevitable if the problem is not addressed when solutions that do not involve drastic cutbacks in investing for the future are still possible. Such pressure will only exist when the underfunding is transparent enough for voters, pension recipients, bondholders, and new residents to see it in enough time to take action before a crisis is at hand. Clearly presenting liability calculation methodologies and realistic interest rate assumptions can enable all involved parties to understand and ultimately trust estimates of unfunded pension liabilities. This could allow real estate markets and bond markets to react accordingly and provide the discipline that has been lacking in the past. Kicking the can down the road has in many cities increased underfunding. While the availability of this information will not immediately balance pension underfunding, it will impel all involved parties to work toward developing feasible budgetary solutions and prevent these liabilities from further increasing and undermining the future of the city itself.

CENTRAL TO THIS BOOK—and troubling for anyone trying to draw a conclusion from it—is the uncertainty of future projections on the acknowledged problem of the underfunding of municipal pension obligations...
BUILDINGS MADE OF GLASS, STONE, AND METAL make us think of permanence. But cities are fluid and ever-changing places where, over time, streets, infrastructure, public spaces, and buildings are constantly being built, improved, demolished, and replaced.

For the people who live next door to a potential development site, such as a vacant lot or an old obsolete building, this means something new will be built on that property sooner or later and it is not a question of if but of when. Yet change is frightening and many people are more comfortable with the familiar, in part because they have difficulty visualizing how a proposed project might actually look and fit into their community. Fear of the unknown begins with rumors of a potential development and increases when community members see the first images of the proposed project at the neighborhood meeting. For people who are not in the development business, it can be difficult to know what to focus on, what to worry about, and how to try to influence the project. Neighbors also have a relatively brief period of time to review the proposal and offer their feedback to the developer and city officials in community meetings and at public hearings. And if the project is approved they know that the inconvenience and aggravation of construction will soon follow.

For a typical project all of this may take less than two years but in the heat of the moment some community members will be unable to pull back and take the long view of this relatively brief period of stress and discomfort. They will have difficulty imagining how the completed development might improve their own lives and make their community a better place—for years, decades, and even centuries to come. It can bring new benefits to the community, including more neighbors, businesses, services, bars, restaurants, retail shops, and perhaps even a grocery store. The development will also increase the tax base and cause the city to increase spending on infrastructure, parks, and other public facilities. And a real estate development project represents a significant and concentrated investment in the community that usually increases surrounding property values. But well before any of these good things will happen, those community members must attend that first public meeting where they learn that change is coming—and that the person who is delivering that change is the real estate developer.

For many community members, real estate developers remain a mystery, and because we don't really understand who they are, what they do, and why they do it, we are in a difficult position when it comes to working with them. And that’s why we need to come to a better understanding of developers, because they are going to keep on developing, and their buildings will remain with us long after the construction dust has settled. The purpose of this book is to begin building that deeper understanding.

This book is based on interviews with more than one hundred people involved in the real estate development business in Chicago, Miami, Portland, Oregon; and the Twin Cities of Minneapolis and Saint Paul, Minnesota (although the emphasis is on development in those first three cities). Together, the stories from these developers and their projects paint a vivid picture of what is common to the real estate development process. They also offer vivid contrasts that illustrate how development is a distinctly local activity that is influenced by climate and geography as well as by the unique social, political, and economic cultures of different cities. An understanding of what is common and what is different will help community members, elected officials, and others participate more productively in the development process in their own communities.

HOW REAL ESTATE DEVELOPERS THINK: DESIGN, PROFITS, AND COMMUNITY

Peter Hendee Brown

How Real Estate Developers Think was published in April 2015 by University of Pennsylvania Press as part of Penn IUR’s series, The City in the 21st Century.
COMPARISON OF THE DEVELOPMENT OF ENERGY SMART COMMUNITIES AMONG APEC MEMBERS

THE PRESSURES OF RESOURCE CONSTRAINTS—both geographical and material—as well energy security and environmental concerns have prompted municipalities around the globe to develop technologies and applications to conserve energy. Over time, many of the techniques for conserving energy have been accepted as best practices and adopted more broadly. An assortment of frameworks to develop comprehensive, city-wide energy (and typically other resource) conservation are available. Some Asia-Pacific Economic Cooperation (APEC) economies have been leaders in the development and implementation of these types of programs, while others are beginning to advance their own frameworks.

The International Panel on Climate Change (IPCC) estimates that urban regions account for up to 76% of energy use and energy-related CO2 emissions and up to half of global greenhouse gas emissions (Intergovernmental Panel on Climate Change 2014). The 2014 IPCC report captures a wealth of knowledge about cities in Chapter 8: Urban Areas. The chapter characterizes 21st century urban growth and the risks posed and ability to adapt to climate change for the world’s cities. Most important, the report brings to the fore research evaluating the efficacy of mitigation measures and policies, and acknowledges the role of city and regional planning as a strong force for mitigation and adaptation to climate change (Birch 2014).

Put another way, “huge opportunities exist for mitigating climate change through actions delivered at city and subnational level… the largest mitigation opportunities are likely to be in rapidly urbanizing areas where urban form and infrastructure are not yet locked in” (LEDS 2014).

This summary looks at the growth of low-carbon and energy smart communities in the APEC region and attempts to assess their success. The report has two sections. The first section is an overview of three programs which offer a conceptual framework for the development of energy smart (efficient) communities: APEC’s The Concept of the Low Carbon Model Town; World Bank’s Ecological Cities as Economic Cities; and OECD’s Green Growth in Cities. These programs both define energy smart communities and present metrics to chart their implementation. The second section measures whether national government policy incentivizes or discourages the creation of low carbon towns based on The Green Growth in Progress primer, What National Governments Can Do to Accelerate Subnational Action on Climate… In their evaluation of the 21 APEC economies the authors find that all APEC economies have some policy activity related to energy smart community development. They also find that development is occurring both in new greenfield contexts, as well as through the adaptation of historically energy intensive urban areas into energy smart communities. They discovered a critical marker among the economies where some economies had strong connections between national and sub-national policy and other economies lacked national government leadership or cohesiveness between levels of government to drive energy smart development. In these latter cases, energy smart development was being initiated at the sub-national or local level and not by national efforts. While the research found that energy smart development will occur in spite of the absence of a strong national effort, it was evident that such strong national leadership will lead to a higher level of deployment and greater levels of verification of proper energy performance through monitoring of key metrics.

See publication for full references.
IN 2009, THE FEDERAL GOVERNMENT acted to devise a national sustainable development agenda by forming the Partnership for Sustainable Communities (PSC), an innovative, interagency agreement among the U.S. Department of Housing and Urban Development (HUD), the U.S. Department of Transportation (DOT), and the U.S. Environmental Protection Agency (EPA).

The PSC defined its vision of sustainable development through iteration and the use of six Livability Principles for policy and program guidance.

The Livability Principles, with their call for improvements in the built environment, define sustainable communities as those that “give Americans more housing choices, make transportation systems more efficient and reliable, reinforce existing investments, protect the environment, and support vibrant and healthy neighborhoods that attract businesses and jobs.” The principles call for providing more affordable housing, energy-efficient and less polluting transportation alternatives, and aid to strengthen existing communities. Although other agencies are engaged in sustainable development projects, PSC stands out for its clear framing of a specific, comprehensive, and operationalized sustainable development agenda.

To advance this work, the agencies publicized the work in digital and print media (for example, DOT dedicated a section of its website dot.gov/livability) or created special offices (for example, EPA created the Office of Sustainable Communities (OSC)). Within 2 years, the effort became more tangible through the awarding of funding based on the Livability Principles, the issuing of publications and supporting research, and advances in communication (for example, creation of a dedicated website sustainablecommunities.gov). Between 2009 and 2014, PSC agencies awarded grants valued at $4.6 billion to more than 1,000 grantees.

As originally conceived, however, PSC’s approach had one weakness: it did not have an associated, easily employed mechanism for evaluation to benchmark and measure progress toward the desired settlement patterns. Over time, PSC agencies worked to remedy the evaluation gap. By 2014, they offered three important tools to help communities evaluate their programs, one of which was the Sustainable Communities Indicator Catalog (SCIC), a searchable database of 31 core indicators that allows communities to select their own set, provides instructions for their calculations, and includes examples of places employing them. Penn IUR created the SCIC. (cont.)
DEVELOPING A U.S. SUSTAINABLE COMMUNITIES INDICATOR CATALOG

Funded by the Ford Foundation, the Penn team devised and executed a five-step process to arrive at an appropriate evaluation system (exhibit 1).

In creating the SCIC, Penn IUR built on its research from previous years and consulted closely with representatives from PSC agencies, with Office of Sustainable Communities grantees, and with other stakeholders and experts. The researchers tested more than 100 indicator systems encompassing more than 400 indicators. In addition, the team developed 14 potential use cases to demonstrate the variety of users and their needs. In March 2013, DOT hosted an expert workshop and, in May 2013, the Lincoln Institute of Land Policy held a second workshop for expert consultation. The Penn IUR team received additional feedback after presenting to professional associations in the United States and abroad, including the 2013 Federal Reserve Community Development Conference, the Organization for Economic Cooperation and Development (OECD), the Urban Affairs Association, and others. It shared experiences with others developing indicator systems, including the OECD, which launched its Better Life Index in June 2014 and Arcadis Sustainable Cities Index (OECD, 2014).

In conjunction with this process, two critical decisions emerged that would drive the effort: first, the decision to use existing in-use indicators wherever possible; second, the decision to develop a flexible, searchable, web-based platform to offer wide choices to different types of communities. The decision to employ indicators that have already been used derived from two practical considerations. First, in-use indicators have a track record. Second, these in-use indicators are often (but not always) supported by scholarly research. Having the ability to refer to the reports or even other users of specific indicators enhances users’ ability to tailor a system. The decision to make users’ choice determine the choice of indicators from a limited list recognizes that different types of places, whether they are cities, counties, regions, or states, have varying goals in their pursuit of sustainability. Notably, this is the same approach being recommended by the high-level expert group, Sustainable Development Solutions Network to the U.N. Statistical Commission for the indicators for soon-to-be-approved Sustainable Development Goals (Sustainable Development Solutions Network, 2015; U.N. ECOSOC, 2015).

The SCIC is fully operational and can be viewed on the PSC website (sustainablecommunities.gov). Included are 11 tip sheets to assist users, the catalog, and links to communities in which the indicators are in use. See publication for full references.
Penn IUR’s expert events and roundtable discussions provide a setting for high-level discussions among policymakers, executives, and preeminent scholars. In 2014–2015, Penn IUR, working with internal and external partners, convened meetings on municipal solvency, housing finance, remote sensing, and ecosystem services.
In the wake of the 2008 financial crisis, many U.S. municipalities faced major fiscal challenges related to their declining operating budgets and pension and health care liabilities. On November 11, 2014 Penn IUR hosted “Urban Fiscal Stability and Public Pensions: Sustainability Moving Forward,” which convened academics and practitioners to identify best practices and potential avenues for reform, focusing on legacy issues of funding public pensions and evaluating strategies for financial sustainability. This event marked the launch of a multi-year effort to investigate urban fiscal sustainability, which is made possible with support by Penn IUR Advisory Board member, Lawrence Nussdorf (W’68).

The meeting had two panels. The first panel featured prominent scholars Robert Inman, Professor of Business Economics and Public Policy, The Wharton School; Matthew McCubbins, Professor of Law and Political Science, Duke Law; Amy Monahan, Professor of Law, University of Minnesota Law School; and Joshua Rauh, Professor of Finance, Stanford Graduate School of Business. Olivia Mitchell, Professor of Business Economics and Public Policy, The Wharton School and Executive Director, Pension Research Council, moderated the discussion.

This academic panel reviewed major points characterizing the scope and scale of the problems facing existing pension systems and the municipalities that manage them. According to Rauh, despite the recent successes in capital markets, unfunded pension liabilities continue to increase in major cities. On the regulation of public pension obligations, Monahan explained the constraints that fiscally distressed states and localities operate under in renegotiating prospective as well as existing obligations for benefits to current employees. McCubbins provided a less-than-optimistic outlook on distressed municipalities’ financial prospects. Concluding the first panel, Inman addressed the economic implications of unfunded liabilities, pointing to the importance of transparency in preventing the worst-case scenarios of default and potential death spirals before they are inevitable.

Shifting perspective, the second panel featured practitioners Rob Dubow, Director of Finance, City of Philadelphia; Matt Fabian, Managing Director, Municipal Market Advisors; Richard Ravitch, former Lieutenant Governor, State of New York; James Spiotto, Managing Director, Chapman Strategic Advisors LLC; and Marcia Van Wagner, Vice President/Senior Credit Officer, Moody’s Investors Service. Robin Prunty, Managing Director, Standard & Poor’s Public Finance Ratings, moderated the discussion.

Ravitch framed the budgetary issues stemming from pension liabilities with his view that as municipalities need to balance day-to-day services provided to their communities with outstanding liabilities, they are less motivated to address the overhanging debt. To counter this problem, panelists Fabian, Spiotto, and Van Wagner advocated for increased supervision and transparency in pension liabilities by reporting the standards used in calculating liabilities. Dubow spoke last, describing successful but hard-fought efforts to reduce the unfunded pension obligation in Philadelphia and to improve its credit rating.

See pages 34–37 for excerpts from Public Pensions and City Solvency, a forthcoming volume from University Pennsylvania Press, edited by Susan M. Wachter, which expands on these issues.
On March 16, 2015, Penn IUR hosted a symposium on creating a twenty-first-century housing finance system, with the Federal Reserve Bank of New York, the Institute for Urban and Regional Development (IUR), and the Penn Wharton Public Policy Initiative (P3) at the University of Pennsylvania. The event was co-hosted by Penn IUR and Penn Wharton Public Policy Initiative (P3). The symposium included a morning panel discussion, followed by a luncheon and a public panel. Following welcomes by Joseph Tracy, Executive Vice President, Federal Reserve Bank of New York and Penn IUR Co-Director Susan Wachter, researchers presented papers on a comparison of legislative proposals for housing finance reform, the role of government institutions in reforming housing policy, and the Tobin-Announced (TBA) market. These papers will be part of the forthcoming volume, “Housing Finance Reform: Perspectives and Prospects: Toward a Twenty-First Century System.”

The morning panel, moderated by Penn IUR Advisory Board Chair Egbert Perry in his role as Fannie Mae’s Non-Executive Chairman of the Board, focused on the basics of reforming the current housing finance system. The session began with Bob Ryan, Senior Advisor, Federal Housing Finance Agency, Theodore Tozer, President, Gimme Mae, and David Stevens, President and CEO, Mortgage Bankers Association. Two roundtable discussions followed the panel, at which participants explored the character of an optimal housing finance system and alternative strategies for creating such a system.

While consensus around the primary features of reform has grown, the inertia keeping the country mired in the current, uncertain system needs to be overcome.

—Susan Wachter

The day-long event included an invitation-only roundtable discussions and lunch and a public panel. Following, researchers presented papers on a comparison of legislative proposals for housing finance reform, the role of government institutions in reforming housing policy, and the Tobin-Announced (TBA) market. These papers will be part of the forthcoming volume, “Housing Finance Reform: Perspectives and Prospects: Toward a Twenty-First Century System.”

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While consensus around the primary features of reform has grown, the inertia keeping the country mired in the current, uncertain system needs to be overcome.
THE SUSTAINABLE CITY: ROUNDTABLE ON SCIENCE, URBAN ECOSYSTEM SERVICES, AND GREEN INFRASTRUCTURE

Penn IUR co-hosted the Spatial Integration Laboratory for Urban Systems (SILUS), a collaborative partnership between the Wharton GIS Lab and the USGS Science and Decisions Center, a day-long symposium on May 19, 2015 entitled “The Sustainable City: Roundtable on Science, Urban Ecosystem Services, and Green Infrastructure.” The symposium brought together 70 participants from across the country, including policymakers, practitioners, and researchers from a variety of fields who discussed the use of green infrastructure in managing green infrastructure, the role of incentives and regulatory mechanisms in developing sustainable cities, and the future of research and practice to enhance urban ecosystem services and green infrastructure.

Symposium participants discussed the use of green infrastructure in managing green infrastructure, the role of incentives and regulatory mechanisms in developing sustainable cities, and the future of research and practice to enhance urban ecosystem services and green infrastructure.

Panelists selected for their leadership as civic innovators and proponents of green infrastructure included Margot Walker, Director, Capital Planning and Partnerships, NYC Office of Green Infrastructure; Tommy Wells, Director, Department of the Environment, Washington D.C.; George Hawkins, CEO and General Manager, D.C. Water and Sewer Authority; Jerry Tinianow, Chief Sustainability Officer, City and County of Denver; Michelle Kuneck-North, Program Coordinator, City of Portland Bureau of Planning and Sustainability; Tracy Tackett, Green Infrastructure Program Manager, City of Seattle; and Howard Neukrug, Program Coordinator, Philadelphia’s Bureau of Planning and Sustainability. Each panelist presented on lessons learned from efforts to develop green infrastructure in their respective municipalities.

Karen C. Seto, Associate Dean of Research, Yale School of Forestry and Environmental Studies, gave the luncheon keynote address. In her presentation, “How Urbanization Can Save (or Wreck) the Planet, and the Science We Need,” Seto discussed the positive and negative effects of cities on the planet’s ecology and the role of science in guiding sustainable urban growth.

In the afternoon, three roundtable discussions created an open-forum opportunity for participants to share perspectives on green infrastructure with respect to urban sustainability. Hogan moderated the first of the three, guiding a discussion of the pitfalls and successes of green infrastructure in their respective municipalities.

In the 2015 exchange (June 22–July 1), delegates from Kobe and Miyako City hosted delegates from New Orleans and Galveston. Their experiences with the 1995 and 2011 disasters provided U.S. delegates with an important perspective on the role of local leaders and organizations in both the short- and long-term recovery process. Site visits demonstrated the key roles played by local organizations and leaders in expediting the recovery process through personal knowledge of the areas and the ability to garner support from their communities to enact changes. The participants shared their unique experiences with municipal and national government policy and response, as well as diverse social and cultural responses to disaster. Though tsunami and earthquake disaster create different types of destruction and require different responses, delegates from Japan and the United States found many similarities in the recovery processes, both economically and socially.

In 2016, the U.S. delegates will host the Japanese in New Orleans and Galveston to discuss political, social, and economic recovery of the Gulf Coast. The project will culminate in 2017 with a Penn IUR-hosted conference in Philadelphia that will focus on collaborative relationships between civil society, government, and business to address a wider range of disaster recovery scenarios and sustainable rebuilding strategies.
Penn IUR offers free programs throughout the year that bring together scholars, practitioners, faculty, students, and the general public.
Penn IUR Eleventh Annual Urban Leadership Awards

On April 15, 2015, Penn IUR held its eleventh annual Urban Leadership Forum, presenting Urban Leadership Awards to Michael Nutter, Mayor of Philadelphia, and Renée Lewis Glover, Chair, Board of Directors, Habitat for Humanity International and Former President and CEO, Atlanta Housing Authority. The award recognizes exemplary officials who have demonstrated leadership in revitalizing urban areas, responded to urban crises, and championed urban sustainability in the United States and around the globe.

Since taking office in January 2008, Michael Nutter has vigorously managed city government through the worst recession since the Great Depression by maintaining core services and reducing the Philadelphia’s spending. “I set some ambitious goals on the first day [in office as mayor], and said that we would be the number one green city in the United States,” Nutter said. Philadelphia is now recognized nationally and internationally as a great, green, and sustainable city.

Renée Glover has pioneered master-planned, mixed-use, mixed-income residential development, creating spaces in which people of all socio-economic profiles live together in amenity-rich communities. Her work has been modeled widely and is now being used as the redevelopment blueprint by the U.S. Department of Housing and Urban Development (HUD). Glover’s exemplary work has contributed immensely to improved housing, public schools, transit access, and economic development activities.

For a video of the event, visit: pensuirp.edu/events

Monument Lab: Creative Speculations for Philadelphia

The Penn IUR-sponsored public art and urban research project Monument Lab: Creative Speculations for Philadelphia took place at Philadelphia’s City Hall from May 15 to June 17, 2015. Through a temporary art installation, public events, and community-sourced research proposals, the project investigated the question: What is an appropriate monument for the current city of Philadelphia? Over its three-week duration, project co-curators Kenneth Lum, Professor of Fine Arts and Director, Undergraduate Fine Arts program, School of Design, Paul H. Farber, Post-Doctoral Writing Fellow, Harvard College, and A. Will Brown, Curatorial Assistant of Contemporary Art, Museum of Art, Rhode Island School of Design, along with a team of staff and volunteers, explored answers to this question at “Monument Lab,” an innovative research pavilion established at City Hall.

At Monument Lab, the project addressed the question through a sculptural installation in the central courtyard of City Hall entitled Prototype Monument for Center Square (2015) by the late artist and Penn Professor of Fine Arts Terry Adkins and a series of free dialogues and public presentations led by Philadelphia artists and critical thinkers using Philadelphia’s rich contemporary cityscape and William Penn’s historic iconic plan for the city’s five public squares as inspiration.

What took place in the spring of 2015 was the first phase of a larger project through which Lum, Farber, and Brown, with their collaborators and partners, hope to present a series of temporary public art installations throughout the city based on ideas generated during the 2015 iteration. This phase of the project was largely about creating a critical and dynamic civic-space-altering work of public art, engineering a meaningful public dialogue about the democratic and speculative importance and power of art and ideas, and engendering an intellectually invested series of institutions and partners in the Philadelphia area.

Monument Lab was funded by the Pew Center for Arts & Heritage. The project was conducted in partnership and with the support of a number of Philadelphia arts and cultural institutions including The Philadelphia Mural Arts Program, Recycled Artist in Residence (RAIR), The Office of Arts, Culture and the Creative Economy, Harvard College, The Pennsylvania Academy of Fine Arts, Next City, Philadelphia Center for Architecture; and Penn’s School of Design.
MONUMENT LAB: CREATIVE SPECULATIONS FOR PHILADELPHIA

Ken Lum, Professor of Fine Arts, Director of the Fine Arts Undergraduate Program at Penn’s School of Design, and principal investigator of the Monument Lab project, summarizes his research findings from this ground-breaking public art and urban research project. For more information on this project, see page 57.

From May 15th–June 7th, during which all of the elements of the Monument Lab: Creative Speculations for Philadelphia project were open to the public, the curators and team members learned a great deal about the vocalized needs, desires and interests of Philadelphia area citizens around public art and our continuing guiding question: What is an appropriate monument for the current city of Philadelphia? To this end, we asked the public to propose what is or has been on their minds regarding a speculative monument for Philadelphia. We asked that the proposal be speculative without limits in terms of budget and bureaucratic procedures.

We learned that Philadelphians are distinctly aware of the impact of policies on debates about memory and advocacy, the importance and significance of unique historical sites and perspectives. It became clear that the people of Philadelphia were already thinking about our central question, or at least some form of the idea of what the city is, what it was, and what it can be, through a lens of monumental participation and production.

Through this project, we were reminded just how rarely the public is asked to think deeply about what histories, places, and people are worth remembering and worth commemorating in official contexts. For Monument Lab, we were concerned with creating a productive and comfortable environment that was open, interactive, and engaging on many levels. Part public art exhibition (consisting of Terry Adkins’ Prototype Monument, a work about public education), part research pavilion, and part venue for public lectures and programs, Monument Lab aspired to make the under-utilized and yet very public site of the courtyard of City Hall a center for true public dialogue.

Using a conservative criterion for measurement, there were almost 34,000 attendees at all public programs, including main and ancillary components (such as Monument Lab guest speaker presentations at the Pennsylvania Academy of Fine Arts.) There were approximately 3,400 Monument Lab pavilion engagements or the number of citizens who approached and engaged with Monument Lab staff at the pavilion. The total number of noon talk participants was 455 for a daily average attendance of 36.

The numbers show a very large number of Philadelphians are animated about the application of public art and public history to this city, and are willing to participate directly in contributing ideas to a process of open creative speculation if they feel their ideas and experiences are valued.

“We were surprised by the profundity of public memory and concern. The top monument proposals by the public dealt with the state of Philadelphia’s public school system, the disparateness of Philadelphia’s neighborhoods particularly in terms of the question of neighborhood renewal, and sites of historical trauma and wounds, with a surprisingly high number of proposals dedicated to the MOVE bombing on Ogont Avenue over thirty years ago. There were also a lot of calls for statuary dedicated to historically significant African Americans who have contributed greatly to the shaping of Philadelphia.

The proposals reveal much about the divide between official and unofficial histories. The call for African-American statuary highlights the fact that presently there exists not a single statue dedicated to an individual African-American figure. A statue of Octavia V. Catto has been commissioned but not yet installed on the southeast apron of City Hall and will be the first statue dedicated to a male African-American. The many proposals involving the topic of the MOVE bombing express a desire of many citizens for official channels to finally start some process of reconciliation for the actions of that event.

Monument Lab offers key ideas and methods for Philadelphia, and other cities, engaging in public art, social practice, and civic engagement research. Specifically we created a site specific, but welcoming, research method. We also created the conditions for a more nuanced discussion around public art, public history and social practice—seeing a discursive shift in the understanding of monumentality and operated from a local point at the intersections of the fields of public history, digital humanities and social and public practice art.
Penn IUR’s public interest series includes lectures, seminars, and panel discussions designed to highlight key topics in urban research and best practices relevant to Philadelphia, the nation, and the global community. In 2014–2015, the series also included a special symposium that explored how Penn’s theme year, Health, related to the city. It included the Penn IUR Urban Book Talk Series, featuring contributions to Penn IUR’s City/Penn Press series and beyond. This year, Penn IUR convened seventeen public interest events.

**September 18, 2014**

**BLACK POWER TV**

**SPEAKERS**
Deborah Heitner, author, Black Power TV
Trudy Haynes, broadcast journalist
Louis Massiah, documentary filmmaker and director, Philadelphia’s Scribe Center
Camille Zubrinich Charles, Professor of Sociology, Penn School of Arts and Sciences

**COSPONSORS**
African American Museum, Philadelphia
Annenberg Center for the Performing Arts

**Penn Libraries**
The Lomax Foundation

**September 26, 2014**

**THE WAR ON POVERTY AT 50: ITS HISTORY AND LEGACY**

This special conference celebrated the work of Penn historian Michael Katz.

For video and post-conference details, visit: https://go.upenn.edu/4ymOG

**HOST**
The Penn Social Science and Policy Forum

**September 26, 2014**

**PENN IUR 10TH ANNIVERSARY EVENT: SUSTAINABLE, EQUITABLE URBAN FOOD SYSTEMS**

**SPEAKERS**
José Luciano, film instructor, City University of New York
Jade Sudduth, Director of Research, CTC (City Town Country) Research

**September 28, 2014**

**URBAN BOOK TALK: THE ACCIDENTAL PLAYGROUND: BROOKLYN WATERFRONT NARRATIVES OF THE UNDESIGNED AND UNPLANNED**

**SPEAKER**
Daniel Campo, Associate Professor in the School of Architecture and Planning at Morgan State University in Baltimore; former planner for the New York City Department of City Planning and author of The Accidental Playground: Brooklyn Waterfront Narratives of the Undesigned and Unplanned

**COSPONSOR**
Department of City and Regional Planning, Penn School of Design

**October 2, 2014**

**URBAN BOOK TALK: CAPTURED BY THE CITY: PERSPECTIVES IN URBAN CULTURE STUDIES**

**SPEAKERS**
Blagovesta Homchjedjikova, editor of Captured by the City: Perspectives in Urban Culture Studies
Michael Samuelian, Vice President, Related Companies

**October 2, 2014**

**PENN IUR 10TH ANNIVERSARY EVENT: AT THE INTERSECTION OF DESIGN, URBANISM, AND THE HUMANITIES**

**SPEAKERS**
Eugenie Birch, Co-Director, Penn IUR
Francesca Russoello Ammon, Assistant Professor, City and Regional Planning, School of Design

**October 3, 2014**

**PENN GIS DAY**

**SPEAKERS**
Kevin Novak, head of Data Science, Uber
Eugene Brusilovsky, Statistician and Director, GIS Analytics in Rehabilitation Research Lab, Temple University, and MUSA Lecturer
Ken Stiel, Doctoral Candidate, City and Regional Planning, and MUSA Lecturer

**COSPONSORS**
Penn Urban Health Lab
Wharton Initiative for Global Environmental Leadership (IGEL)

**October 23, 2014**

**PENN IUR 10TH ANNIVERSARY EVENT: URBAN WOMEN’S HEALTH IN THE UNITED NATION’S POST-2015 AGENDA**

**SPEAKERS**
Basile Baudrez, Maître de Conferences, University of Paris-Sorbonne

**December 3, 2014**

**RACE, POVERTY, AND CHANGE IN AMERICA: THE PERSISTENT DILEMMAS OF EQUITY AND EQUALITY**

This two-day symposium commemorated the anniversaries of Brown v. Board, the Civil Rights Act, the War on Poverty, and Lau v. Nichols.

For full details, visit: go.upenn.edu/rpccsymposium/register

**COSPONSORS**
Graduate School of Education and the Center for Africana Studies
Annenberg School for Communications

**Law School**
School of Arts and Sciences
Social Policy and Practice
The Wharton Sports Initiative

**The Wharton School**
2015 Penn IUR partnered with alumni in Toronto and Atlanta to host special events that explored unique developments in each city.

OCTOBER 7, 2014

Cities and Waterfront Development:
An Exclusive Look at Toronto’s Innovative Model

Canary District Sales Centre, West Don Lands, Toronto

The story of the transformation of Toronto’s waterfront provides useful lessons for many cities. In a special presentation to Penn alumni and parents, John Campbell, President and CEO of Waterfront Toronto and Eugénie Birch, Co-Director of Penn IUR, offered their insights and observations on the CIBC Pan Am Games Athletes’ Village and Canary District project and what lessons it provides on the development of thriving waterfronts and cities throughout North America. This event provided the inside story of Toronto’s waterfront development and an opportunity to discuss the development of sustainable cities through waterfront revitalization. The evening was hosted and moderated by Ken Tunneman, Chairman of Kilmer Developments, the co-developer of the Village.

LCT: A view development by Dundee Kilmer Developments called the Canary District in the West Don Lands area of Toronto, Ontario, Canada. This project was part of the 2015 Pan Am Games Athletes Village in July 2015. Photo by Spencer Wynn.

APRIL 22, 2015

MUSA Earth Day Lecture: Global Mapping and Remote Sensing for Sustainable Urbanization

Speakers

Budhendra Bhanduri, Director, Urban Dynamics Institute, Oak Ridge National Laboratory
Marc Imhoff, Visiting Research Scientist, Earth System Science Interdisciplinary Center, University of Maryland
Mark Montgomery, Senior Associate, Population Council
Martino Pesaresi, Scientific Officer, Global Security and Crisis Management Unit, Joint Research Centre—Institute for the Protection and Security of the Citizen (IPSC)
Christopher Small, Lamont Research Professor, Lamont-Doherty Earth Observatory, Columbia University
Richard Weller, Martin and Mary Meyerson Chair of Urbanism, Professor and Chair of Landscape Architecture, Penn School of Design
Eugénie Birch, Co-Director, Penn IUR

Cosponsors

Wharton Initiative for Global Environmental Leadership (IGEL)

APRIL 22, 2015

Heathy Urban Infrastructure: The Future of Green Building Standards and Energy Policy

Speakers

Elizabeth Beardsley, Senior Policy Council, U.S. Green Building Council
Alex Dew, Executive Director, Delaware Valley Green Buildings Council
William Braham, Associate Professor of Architecture and Director, Masters of Environmental Building Design (MBED) Program, Penn School of Design
Erica Cochran, Assistant Professor and U/Design Program Director, Carnegie Mellon University
Mark Alan Hughes, Professor of Practice, City and Regional Planning, Penn School of Design; Faculty Director, Kleinman Center for Energy Policy

Cosponsors

Kleinman Center for Energy Policy
Penn School of Design

MARCH 25, 2015

The Future of Green Infrastructure: Healthy Urbanization

Speakers

Bill McKibben, Author and Environmental Activist
Susan Wachter, Eugene Birch, Penn School of Design and Chair of Landscape Architecture, Meyerson Chair of Urbanism, Professor of Practice, College of Architecture; Faculty Director, Kleinman Observatory, Columbia University

Cosponsors

Earth System Science Interdisciplinary Center, University of Maryland
Earth System Science Interdisciplinary Center, University of Maryland

MARCH 15, 2015

Healthy Urban Infrastructure: The Future of Green Building Standards and Energy Policy

Speakers

Elizabeth Beardsley, Senior Policy Council, U.S. Green Building Council
Alex Dew, Executive Director, Delaware Valley Green Buildings Council
William Braham, Associate Professor of Architecture and Director, Masters of Environmental Building Design (MBED) Program, Penn School of Design
Erica Cochran, Assistant Professor and U/Design Program Director, Carnegie Mellon University
Mark Alan Hughes, Professor of Practice, City and Regional Planning, Penn School of Design; Faculty Director, Kleinman Center for Energy Policy

Cosponsors

Kleinman Center for Energy Policy
Penn School of Design

FEBRUARY 24, 2015

City of Resurgence: Exploring Atlanta’s Urban Transformation Past, Present, and Future

High Museum of Art, Atlanta

Following a behind-the-scenes tour of the High Museum of Art’s exhibit, Wifredo Lam: Imagining New Worlds, Penn IUR hosted a series of “lightning” talks examining many facets of Atlanta’s complex urban growth. The talks provided insights on cultural anchor institutions, like the Woodruff Arts Center (which houses the High Museum), and their role in urban development; transformative projects in the works; how Atlanta’s development compares to cities across North America; and how values of health and shared prosperity can be assessed and integrated into redevelopment efforts. Speakers included Virginia Hopner (W’79), President and CEO, Woodruff Arts Center; Egbert Perry (ENG’76, W’78, ENG’83), University of Pennsylvania Trustee and Chairman and CEO, The Integral Group, LLC; David Breuneman, Director of Collections and Exhibitions, High Museum of Art; Eugénie Birch, Co-Director, Penn IUR; Nisha Botchwey (HRES’93), Associate Professor, School of City and Regional Planning, Georgia Institute of Technology, College of Architecture; and Stuart Andrewson (BRE’94), Community and Economic Development Adviser, Federal Reserve Bank of Atlanta.

LCT: A view development by Dundee Kilmer Developments called the Canary District in the West Don Lands area of Toronto, Ontario, Canada. This project was part of the 2015 Pan Am Games Athletes Village in July 2015. Photo by Spencer Wynn.

FEBRUARY 15, 2015

Healthy Urban Infrastructure: The Future of Green Building Standards and Energy Policy

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Mark Alan Hughes, Professor of Practice, City and Regional Planning, Penn School of Design; Faculty Director, Kleinman Center for Energy Policy

Cosponsors

Kleinman Center for Energy Policy
Penn School of Design

FEBRUARY 5, 2015

The Annual Ian McHarg Lecture

Speaker

Laurie D. Olin, Practice Professor of Landscape Architecture, Penn School of Design

Host

Department of Landscape Architecture, Penn School of Design

FEBRUARY 5, 2015


Speakers

Robert Ryan, Senior Advisor, Federal Housing Finance Agency
David Stevens, President and CEO, National Mortgage Association
Ted Tozer, President, Government National Mortgage Association (Ginnie Mae)

Cosponsors

Department of Landscape Architecture, Penn School of Design
Penn IUR

APRIL 13, 2015

Pierre Bélanger: “1:1 Billion on Landscape, Infrastructure, Power”

Speaker

Pierre Bélanger, Associate Professor of Landscape Architecture and Co-Director of the MDes Postgraduate Design Research Program, Harvard University Graduate School of Design

Host

Department of Landscape Architecture, Penn School of Design

APRIL 3, 2015

Pierre Bélanger: “1:1 Billion on Landscape, Infrastructure, Power”

Speaker

Pierre Bélanger, Associate Professor of Landscape Architecture and Co-Director of the MDes Postgraduate Design Research Program, Harvard University Graduate School of Design

Host

Department of Landscape Architecture, Penn School of Design

FEBRUARY 15, 2015

Healthy Urban Infrastructure: The Future of Green Building Standards and Energy Policy

Speakers

Elizabeth Beardsley, Senior Policy Council, U.S. Green Building Council
Alex Dew, Executive Director, Delaware Valley Green Buildings Council
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Mark Alan Hughes, Professor of Practice, City and Regional Planning, Penn School of Design; Faculty Director, Kleinman Center for Energy Policy

Cosponsors

Kleinman Center for Energy Policy
Penn School of Design

APRIL 22, 2015

MUSA Earth Day Lecture: Global Mapping and Remote Sensing for Sustainable Urbanization

Speakers

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Richard Weller, Martin and Mary Meyerson Chair of Urbanism, Professor and Chair of Landscape Architecture, Penn School of Design
Eugénie Birch, Co-Director, Penn IUR
Susan Wachter, Co-Director, Penn IUR

Cosponsors

Wharton Initiative for Global Environmental Leadership (IGEL)
Penn IUR provides programs for students interested in pursuing urban scholarship, at all levels of study.
The Spring 2015 Undergraduate Urban Research Colloquium (UURC) brought seven undergraduate students together with their faculty mentors from across the university. Supported by five faculty mentors from City and Regional Planning, Urban Studies, Musicology, and Wharton, the students developed their research skills as they pursued urban-focused questions. Their research topics addressed a diverse range of urban issues, including: food access and behaviors, socioeconomic change in Dubois’ historic Seventh Ward, media and the public school debates, the historical influence of music education in West Philadelphia, the relationship between politics and public pension systems, and an exploration of solutions to informal settlements in rapidly urbanizing countries. They mastered an array of research methods from qualitative interviews and media scans to GIS-mapping and regression analyses. In addition, the students benefited from the research techniques and insights of faculty across Penn via guest lectures, including faculty from the School of Design, the Graduate School of Education, and the Annenberg School for Communication.

Meagan Ehlenz (Ph.D., 2015, Department of City and Regional Planning) led the UURC course. The students tackled an array of urban problems and generated research findings that are showcased here: penniur.upenn.edu/instruction/undergraduate. For many students, the course was the first step in ongoing research—a number of students have continued to work with their faculty mentors on their projects through the summer (see page 14 for Anne Stack’s report from the field).
Anne Stack, a rising senior in the College of Arts and Sciences majoring in Architecture, and Laura Rigell, a rising senior at Swarthmore College who was matriculated in the Penn exchange program, enrolled in Penn IUR’s Undergraduate Urban Research Colloquium (UURC; see more on page 66) to learn research methods and begin this landscape study on the use of sites and services approaches in rapidly urbanizing places.

The following excerpt is the conclusion of the paper they authored for the UURC in May 2015.

“Sites and services is more than a land development tactic. It also conveys an attitude and a judgement. Implicit in the adoption of ‘sites and services’ is a recognition that the current urban development process, as it relates to housing, tends to strip what has been a major housebuilding resource in an earlier and less sophisticated age; the initiative and the capacity of the homeowner himself.” (Keyes 1973)

Housing solutions are a complex issue to solve. There are many external factors that affect their success and viability that need to be effectively navigated in order for a solution to work. Politics, geography, ecology, social and cultural complexities, environmental and climate issues, and cost and profitability all come into play when attempting to design for urban expansion.

Turner’s theories remain compelling, though the details of future project implementations should be informed by past attempts. Importantly, there should be a shift from the pattern of developing vast residential projects on the edge of the city to establishing multiuse projects closer to the formal city.

Norwood summarizes factors for a successful project:

“The biggest incentive to the provision of good houses on site and service principles is to give a man a plot with water nearby, a market within a mile, and his place of employment within reasonable distance. He must know that the plot is his own, that he can sell any building he erects for market value or leave it to his children. He should not have to adhere to a mass of detailed byelaws and town planning rules when he erects his house. There must, however, be basic building rules which he understands and can reasonably comply with: notably that he should keep a certain distance from his plot boundaries, and only erect one house on his plot.” (Norwood 1973)

This analysis of sites and services has highlighted the importance for case study evaluations and more thorough research into specific projects. Interviews with beneficiaries in successful and less successful projects would prove indispensable to future initiatives. Building on lessons learned from the past, sites and services remains a viable solution to slums and inadequate housing in the Global South.
MASTER OF URBAN SPATIAL ANALYTICS

The Master of Urban Spatial Analytics (MUSA) is a nine-month graduate program coupling spatial analysis skills—most notably Geographic Information Systems (GIS)—with substantive knowledge in urban content areas including criminology, design, economic and community development, education, local and state government administration, public health, real estate, urban land use planning, social welfare, transportation, and urban demography. While many university and college programs offer certificates in GIS, Penn offers one of the few full, on-campus master’s programs in urban spatial analysis. Now in its tenth year, the MUSA program remains a unique master’s degree that integrates spatial analysis with multiple urban disciplines, provides skills for academic, research, and industry careers, and exposes students to some of the most knowledgeable faculty in the field.

MUSA is lodged in the School of Design, guided by a university-wide Academic Committee and provided with administrative support from Penn IUR. The program draws on teaching and research faculty from the fields of design, engineering, business, and public health.

STUDENTS

In Spring 2015, thirteen students graduated from the program, bringing the total number of graduates to 100 since the program launched in 2005. In order to complete the degree, students are required to complete a final project that applies spatial analysis to an urban content area of each student’s choosing. Select 2015 final projects included:

- Environmental Impact Assessment of Petroleum Spill Using GIS
- Can GIS Be Used to Model Pedestrians in Manhattan?
- Using Channelization Techniques to Build a Hyperspace Network for the Star Wars Galaxy
- Using GIS to Support In-Flight Operations in the Event of An Airport Outage
- Analysis of Scenic Biking Routes in San Francisco
- Time Awareness Travel Plan Platform

MUSA students go on to hold professional positions in a diversity of fields in the public and private sectors. Exemplary positions include Malaria Analyst, Clinton Health Access Initiative, Harare, Zimbabwe; Aerial Sensor Operator, Keystone Aerial Surveys, Inc., Philadelphia, PA; Programmer, Augur Intelligence Technology (Guangzhou) Co. Ltd., Guangzhou, China; Associate, Planner and Urban Designer at Wallace Roberts & Todd, LLC, Philadelphia, PA; Assistant Director, Philadelphia Redevelopment Authority, Philadelphia, PA; Director, Data Analytics, Department of Rehabilitation Sciences, Temple University; Data Journalist, Associated Press; Ph.D. Candidate, Department of City and Regional Planning, Penn School of Design; and Cityworks-GIS Asset Manager, Department of Public Works, City of Richmond, Richmond, VA.

MUSA ACADEMIC COMMITTEE

A university-wide academic committee advises on the program’s development, ensuring an interdisciplinary strategic vision for the program. Many of the committee members also teach MUSA courses. Members include:

- David Bell, Xinmei Zhang and Yongge Dai Professor, Professor of Marketing, The Wharton School
- Eugénie Birch, Co-Director, Penn IUR; Lawrence C. Nussdorf Professor of Urban Research and Education, Department of City and Regional Planning, School of Design
- Charles Branas, Professor of Epidemiology, Perelman School of Medicine
- Dennis Culhane, Professor and Dana and Andrew Stone Chair in Social Policy, School of Social Policy and Practice
- Irma Elo, Professor of Sociology, School of Arts and Sciences
- Amy Hillier, Associate Professor in City and Regional Planning, School of Design, MUSA Academic Director
- John Landis, Crossways Professor of City and Regional Planning, Department of City and Regional Planning, School of Design
- Janice Madden, Professor of Regional Science, Sociology, Urban Studies, and Real Estate, School of Arts and Sciences and The Wharton School
- Tony Smith, Professor of Systems Engineering and Regional Science, School of Engineering and Applied Science
- Dana Tomlin, Professor of Landscape Architecture, School of Design and Co-Director, Cartographic Modeling Laboratory
- Susan Wachter, Co-Director, Penn IUR; Sussman Professor of Real Estate and Finance, The Wharton School
- Douglas Wiebe, Associate Professor of Epidemiology, Perelman School of Medicine
Each year Penn IUR brings together urban-focused doctoral-level researchers to foster cross-disciplinary partnerships and collaborative research opportunities. The Urban Doctoral Poster Session provides doctoral students at all stages of their studies the opportunity to come together with faculty to present their research in a supportive environment. The Urban Doctoral Symposium, hosted each spring before graduation, displays the graduating doctoral candidates’ research to family, friends, colleagues, and mentors and is followed by a celebratory lunch.

**2015 Urban Doctoral Poster Presentation**

Eight doctoral students presented their work at the 2015 Urban Doctoral Poster Presentation session on February 12, 2015. The presenters and their subjects are listed on these pages.

### Students

**Ellen Donnelly**  
Graduate Group in Political Science and Criminology, School of Arts and Sciences  
- *In Pursuit of Racial Justice: Assessing the Politics and Consequences of Racial Disparity Reform in the U.S. Criminal Justice System*

**Sara Jacoby**  
Graduate Group in Nursing, School of Nursing  
- *Ethnographic Study of Black Patients’ Experiences of Injury and Hospitalization at an Urban Trauma Center in Philadelphia*

**Theodore Lim**  
Graduate Group in City and Regional Planning, School of Design  
- *Beyond Percent Impervious: Importance of Context in Planning Urban Green Stormwater Infrastructure*

**Simon Mosbah**  
Graduate Group in City and Regional Planning, School of Design  
- *Defining and Analyzing Airport Economic Development Zones in the U.S.*

### Projects

**Mary Rocco**  
Graduate Group in City and Regional Planning, School of Design  
- *Revitalizing Legacy Cities: A Landscape Study of Philanthropic Grant Making, 2003–2013*

**Joseph Su**  
Graduate Group in City and Regional Planning, School of Design  
- *Rebuilding, Retreat, or Resilience: Can Taipei Plan for Resilience?*

**Alexandra Wimberly**  
Graduate Group in Social Policy and Practice, School of Social Policy and Practice  
- *Yoga Intervention for Substance Use and Art Adherence in Community Reentry*

**Albert Zevelev**  
Graduate Group in Applied Economics, The Wharton School  
- *Regulating Mortgage Leverage: Fire Sales, Foreclosure Spirals and Pecuniary Externalities*
ANNUAL URBAN DOCTORAL SYMPOSIUM

At the end of the semester, on May 15, 2015, Penn IUR and Penn’s Urban Studies Program hosted the Annual Urban Doctoral Symposium in celebration of the achievements of six graduating doctoral students. The event featured the following presentations:

1. Jonathan Argaman
   Graduate Group in Political Science, School of Arts and Sciences
   
   INTERNATIONAL, CONNECTED, AND ON THE EDGE: ASPIRATIONAL CITY PLANNING IN CAIRO

2. Peter Blair
   Graduate Group in Applied Economics, The Wharton School
   
   THE EFFECT OF OUTSIDE OPTIONS ON NEIGHBORHOOD TIPPING POINTS

3. Benjamin Chrisinger
   Graduate Group in City and Regional Planning, School of Design
   
   IF YOU BUILD IT, WILL THEY COME, AND WHAT WILL THEY EAT? INVESTIGATING SUPERMARKET DEVELOPMENT IN FOOD DESERTS

4. Meagan Ehlenz
   Graduate Group in City and Regional Planning, School of Design
   
   ANCHORING COMMUNITIES: THE IMPACT OF UNIVERSITY INTERVENTION IN NEIGHBORHOOD REVITALIZATION

5. Joseph Su
   Graduate Group in City and Regional Planning, School of Design
   
   REBUILD, RETREAT, OR RESILIENCE: CAN TAIPEI PLAN FOR RESILIENCE?

6. Albert Zvelev
   Graduate Group in Applied Economics, The Wharton School
   
   REGULATING MORTGAGE LEVERAGE: FIRE SALES, FORECLOSURE SPIRALS, AND PECUNIARY EXTERNALITIES

The presentations were followed by a question-and-answer session moderated by Mark Stern, Co-Director of the Urban Studies Program and Kenneth L.M. Pray Chair and Professor of Social Welfare and History, School of Social Policy and Practice; and closing remarks by Eugénie Birch, Co-Director of Penn IUR, Lawrence C. Nussdorf Professor of Urban Research and Education Professor and Chair, Graduate Group in City and Regional Planning, School of Design, and Elaine Simon, Co-Director, Urban Studies, School of Arts and Sciences.

PENN’S HUMANITIES, URBANISM, AND DESIGN (H+U+D) INITIATIVE

Penn IUR plays a supportive role in the Penn Humanities, Urbanism, and Design (H+U+D) Initiative, a joint project of the School of Design and the School of Arts and Sciences, funded by the Andrew Mellon Foundation. In 2014–2015, H+U+D continued its mission to bridge the gaps between urbanists in the humanities and design disciplines. The initiative’s core activity is the H+U+D Faculty Colloquium. In addition, the initiative sponsors several other outreach, instructional, and research activities, Eugénie Birch, Co-Director of Penn IUR, and David Browne, Frances Shapiro-Weitzenhöffer Professor and Chair, Graduate Group in the History of Art School of Arts and Sciences, co-direct the five-year initiative.

The H+U+D Faculty Colloquium, composed of twenty members selected competitively, meets twice monthly to share research, host guest lecturers and engage in field trips related to humanities and design topics. This fall, five new members joined the colloquium. From the School of Design were: Francesca Ammon, Assistant Professor of City and Regional Planning; Stefan Al, Associate Professor of Urban Design; and Nancy Waltham-Smith, Assistant Professor of Music. On May 8, 2015, H+U+D Colloquium members traveled to New York City to tour MoMA’s largest exhibition on Latin American architecture in over fifty years: “Latin American in Construction: 1955–1980.” Patricio de Real, one of the show’s curators, joined the group for a lively discussion of the process of putting together an exhibition that spans a large period of time and of geography.

Among the H+U+D outreach activities were lectures and conference presentations. On November 20, 2014, H+U+D hosted its annual lecture, “The Decor of an Opera Built Yesterday—Saint Petersburg’s Panorama,” by Basile Baudez, Maître de Conferences, University of Paris-Sorbonne. Baudez discussed the architecture of Saint-Petersburg. The H+U+D Initiative also co-sponsored, with Penn’s Department of Architecture, “Weird Formalism,” with Graham Harman, Professor of Philosophy, American University in Cairo. H+U+D Faculty Colloquium initiated discussions about the project at the national conferences of the Association for Collegiate Schools of Planning (ACSP), the Urban History Association (UHA) and the Society of Architectural Historians.

The H+U+D instructional initiative consists of two types of courses and instructional support. The first type is a graduate level problematics course. In the fall semester, H+U+D
offered a graduate seminar open to students across the university on architectural criticism co-taught by Jonathan Barnett, Professor of Practice in City and Regional Planning emeritus, School of Design, and Liliane Weissberg, Christopher H. Browne Distinguished Professor of German and Comparative Literature, School of Arts and Sciences.

The second type of course is the undergraduate city seminar. In the spring semester, H+U+D offered its first two international city seminars: The Making of Modern Paris and Cosmopolitan Urbanism in the 21st Century. In the former, undergraduate students traveled to Paris with Eugénie Birch and Andrea Goulet, Associate Professor of Romance Languages, School of Arts and Sciences. In the latter, another group of students journeyed to Rio de Janeiro with Daniel Barber, Assistant Professor and Associate Chair of Architecture, School of Design, and John Tresch, Associate Professor and Chair, Graduate Group in the History and Sociology of Science, School of Arts and Sciences. Details from both trips are available on the H+U+D website. In addition to the international city seminars, each year H+U+D sponsors a domestic seminar. This year students traveled with Eric Schneider, History, Assistant Dean and Associate Director for Academic Affairs and Michael Nain, Urban Studies to Baltimore, Maryland.

Each year, the initiative supports student and faculty research awards. For the students, it offers competitively awarded grants to undergraduate and graduate students who braid the humanities and design threads in the study of cities. Awards for 2014–2015 went to Elizabeth Dyer, a Ph.D. student in History, who examined the history of theater construction and the evolution of its use in Kenya, Jesse Smith, a Ph.D. student in History and Sociology of Science, who studied the history of the cruise ship industry and its impact on urban form in Miami, Florida, Alon Tam, a Ph.D. student in Near Eastern Languages and Civilization, who explored the role of cafés in the development of cosmopolitan culture in Cairo in the first half of the twentieth century, and Thuy Le, an undergraduate student in Architecture, who designed an app for mobile devices that allows users to view the computer renderings of the “virtual history” of particular building façades in Philadelphia. Faculty awards for course development went to Kenneth Lum, Professor, Fine Arts, School of Design, and Elaine Simon, Co-Director, Urban Studies, School of Arts and Sciences.

For more information on the Initiative and its programs, visit: humanitiesurbanismdesign.com

H+U+D promotes integrated knowledge of 21st century urbanism across humanities and design disciplines at Penn. Faculty and students can explore the creation of culturally rich and satisfying, environmentally sustainable and resilient, and socially just and healthy places for present and future city dwellers.
Meagan Ehlenz, a recent Ph.D. in City and Regional Planning and Penn IUR Research Associate explored anchor institutions and their neighborhoods.

Her work is to be published in a forthcoming issue of Urban Affairs Review as “Neighborhood Revitalization and the Anchor Institution: Assessing the Impact of the University of Pennsylvania’s West Philadelphia Initiatives on University City.” The following is an excerpt from this paper.

Based upon a twenty-year assessment of Census trends, it appears that University City has experienced a distinct shift in the composition of its neighborhood, though the changes were not uniform. While many of University City’s indicators trended towards revitalization and growth, the reality is that the PAS often claimed more than its “share” of positive change and, as a result, buoyed the remainder of the neighborhood. Structural changes to the population, made evident by shifts in the racial composition, occurred throughout University City; meanwhile socio-economic and housing trends inside of the PAS catchment diverged from the remainder of University City, as well as the larger West Philadelphia area.

Penn employed many strategies that the literature now classifies as best practices. It targeted its resources in a specific location and invested in interventions that would resolve market failures (e.g., crime and safety, public amenities and services, distressed properties), thereby priming the neighborhood for private investment in the future. These investments add up to an attraction strategy for University City, stabilizing the market and providing higher quality amenities (e.g., a strong neighborhood school, new retail options, improved public space) in order to stimulate new demand. In this respect, the West Philadelphia Initiatives (WPI) has been a great success.

Yet, while the WPI satisfied many of Penn’s criteria for neighborhood improvement, the analysis is relatively ambiguous from the perspective of the community. Across University City, and especially inside of the PAS, the worst indicators showed some improvement between 1990 and 2010, in spite of worsening trends in West Philadelphia. Significant improvement, however, was not uniformly evident and socio-economic indicators outside of the PAS remained well below those of the city, as well as nearby blocks located within the PAS catchment.

Inside of the PAS, rising home values occurred in tandem with rising incomes, falling poverty rates, and a significant shift in the racial composition. Collectively, these indicators point towards the gentrification of the PAS area, as new households were attracted to the neighborhood by a strong school and enhanced urban amenities, bringing more wealth and housing competition with them. The PAS area, however, is not necessarily stable—the housing market is non-competitive, in terms of affordability and vacancy rate, it limits access for many households. Conversely, census data suggests that housing demand outside of the PAS also increased, but it was decoupled from wealth gains. In other words, even as housing became more expensive, the population was less equipped to shoulder the burden, illustrated by decreasing incomes and increasing poverty rates.

Taken together, the transformation of the PAS area implies that strong neighborhood schools are a powerful tool in an anchor institution’s efforts to stabilize and revitalize communities—and other institutions are taking note. Since Penn invested in the PAS, a number of urban universities have replicated the neighborhood school model in their revitalization strategies. For instance, Johns Hopkins University is a major contributor to the recently opened Henderson Hopkins School, a K–8 public school and the centerpiece of EBDI’s efforts to stabilize East Baltimore. … Other universities have established K–12 partnerships, directing fiscal and human capital towards specific schools or public school districts. … It remains to be seen how these different styles of educational partnerships and investments will influence neighborhood revitalization or compare to University City’s experience with the PAS. But the willingness of universities to commit financial resources to K–12 strategies indicates they think the benefits will be worth the cost.
Penn IUR networks scholars, practitioners, and students seeking solutions for today’s cities. It works with advisors from across the disciplines to shape its programs and initiatives.
To celebrate the diverse urbanists—researchers and practitioners—collaborating with Penn IUR and helping to expand Penn IUR’s growing body of work, the Institute has established six honoree categories to formally recognize these important relationships. Through these networks, Penn IUR aims to foster an environment that encourages cross-disciplinary connections and nurtures a collaborative spirit across the University and beyond.

**PENN IUR FACULTY FELLOWS AND EXECUTIVE COUNCIL**

Penn faculty with a demonstrated interest in cities.

*Faculty Fellow Executive Council members are denoted with an asterisk.*

**Stefan Al,** Associate Professor of Urban Design, Department of City and Regional Planning, School of Design

**Francesca Ammon,** Assistant Professor, Department of City and Regional Planning, School of Design

**Daniel Barber,** Assistant Professor and Associate Chair, Department of Architecture, School of Design

**David Barnes,** Associate Professor, Department of History and Sociology of Science, Director of Health and Societies Major, School of Arts and Sciences

**Jonathan Barnett,** Professor Emeritus of Practice, Department of City and Regional Planning, School of Design

**David Bell,** Ximeni Zhang and Yongge Dai Professor, Department of Marketing, The Wharton School

**Eugenie Birch,** Lawrence C. Nussdorf Professor of Urban Research and Education and Chair, Graduate Group in City and Regional Planning, Department of Design; Co-Director, Penn Institute for Urban Research

**Philippe Bourgois,** Richard Perry University Professor of Anthropology and Family and Community Medicine; Department of Anthropology, School of Arts and Sciences; Department of Family Medicine and Community Health, Perelman School of Medicine

**Charles Branas,** Professor of Epidemiology, Department of Biostatistics and Epidemiology, Perelman School of Medicine

**Lawrence Brown,** Hans Busch Professor, Department of Statistics, The Wharton School

**David Brownlee,** Frances Shapiro-Welshenhoff Professor and Chair, Graduate Group in the History of Art, Department of History of Art, School of Arts and Sciences

**William Burke-White,** Richard Perry Professor; Inaugural Director, Perry World House; Deputy Dean and Professor of Law, Law School

**Carolyn Cambuscio,** Assistant Professor, Department of Family Medicine and Community Health, Perelman School of Medicine

**Camille Z. Charles,** Edmund J. and Louise W. Kahn Term Professor in the Social Sciences, Department of Sociology, School of Arts and Sciences

**Ram Cnaan,** Associate Dean for Research; Professor and Chair; Doctoral Program in Social Welfare; Director, Program for Religion and Social Policy Research; Department of Social Welfare, School of Social Policy and Practice

**Gilles Duranton,** Dean’s Chair in Real Estate Professor and Chair, Department of Real Estate, The Wharton School

**Fernando Ferreira,** Associate Professor of Real Estate and Business Economics and Public Policy, Department of Real Estate, The Wharton School

**Kenneth R. Foster,** Professor, Department of Bioengineering, School of Engineering and Applied Science

**Vivian Gadsden,** William T. Carter Professor of Child Development and Education; Division of Language and Literacy in Education, Graduate School of Education

**Richard Gelles,** Joanne and Raymond Welsh Chair of Child Welfare and Family Violence; Director, Center for Research on Youth and Social Policy, School of Social Policy and Practice

**Edward George,** Universal Furniture Professor; Department of Statistics, The Wharton School

**Raffaela Fabiani Gianetto,** Assistant Professor, Department of Landscape Architecture, School of Design

**Karen Glanz,** George A. Weiss University Professor, Professor of Epidemiology and Nursing; Director, Center for Health Behavior Research, School of Nursing

**Andrea Goulet,** Associate Professor and Graduate Chair, French, Department of Romance Languages, School of Arts and Sciences

**Dennis Culhane,** Professor and Dana and Andrew Stone Chair in Social Policy, School of Social Policy and Practice

**Thomas Daniels,** Professor and Interim Chair, Department of City and Regional Planning, Director, Certificate in Land Preservation Program, School of Design

**John Dilulio, Jr.,** Frederic Fox Leadership Professor of Politics, Religion, and Civil Society; Director, Robert A. Fox Leadership Program, Department of Political Science, School of Arts and Sciences

**Mauro Guillen,** Dr. Felix Zilandman Professor of International Management; Director, Lauder Institute, Department of Management, The Wharton School

**Joseph Gyouko,** Martin Buesbaum Professor of Real Estate and Finance and Business Economic and Public Policy; Director, Samuel Zell and Robert Lurie Real Estate Center, Department of Real Estate, The Wharton School

**Gary Hack,** Professor Emeritus, Department of City and Regional Planning, School of Design

**Kathleen Hall,** Associate Professor of Education and Anthropology, Division of Education, Culture, and Society, School of Arts and Sciences

**Jesse Handbury,** Assistant Professor, Department of Real Estate, The Wharton School

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LAND FOR PUBLIC GOOD IN EMERGING ECONOMIES

In the three next decades, the United Nations anticipates some 2.5 billion people to become urbanites, primarily in Africa and Asia. This research project will continue to examine public and private decision-making at the national, regional, and local levels which is struggling with how to provide the necessary housing and basic services to city-dwellers.

GLOBAL URBAN COMMONS

Penn IUR will support and expand this virtual network of university-based research institutions as a means of rapidly disseminating the latest urban research from Penn and around the globe.

ECOSYSTEM SERVICES FOR URBAN RESILIENCY

With support from USGS, Penn IUR will continue to foster dialogue on how ecosystem services can be restored in urban environments, highlighting local and national interventions as case-studies.

ANCHOR INSTITUTIONS AND THEIR IMPACTS ON THE CITY AND REGION

Looking specifically at university-led innovation and commercialization initiatives, Penn IUR will host a peer-to-peer exchange and release a new set of instructional case studies showcasing what six of the most innovative universities are doing in this area of economic development.

UREN FISCAL STABILITY AND SUSTAINABILITY GOING FORWARD

Through a series of events that bring together leading practitioners, policymakers, and researchers, Penn IUR and partners will address the complex fiscal issues facing cities in both the developed and developing world and how the impending Sustainable Development Goals (SDGs) will alter the course of cities worldwide.

U.S.–JAPAN EXCHANGE: CITIZEN PARTICIPATION IN COMMUNITY BUILDING POST-DISASTER

The East–West Center, Penn IUR, and the Urban Community Research Center for Asia at Kwansei Gakuin University will carry forward the three-year dialogue and travel exchange project to study local efforts that effectively engage citizens in participatory planning and community building activities that address the long-term recovery and rebuilding of communities after disasters.

RE-DESIGNING THE U.S. HOUSING FINANCE SYSTEM

Through expert convenings and publications, Penn IUR and partners will further investigate the current U.S. housing system and potential reforms for making it sustainable.

AUTOMATION, ROBOTICS, AND THE FUTURE OF CITIES

To celebrate Penn’s Year of Discovery, Penn IUR will explore innovations in automation and robotics and their urban utility. This special symposium will feature speakers from academia and the private sector who will share current developments in automated and remote controlled technology—from driverless vehicles to drones—and look at how these advancements will change the way people move and live in cities.
Understanding Our Cities, Understanding Our World