Toward a Sustainable City: The State of Innovation in Urban Sustainability

By Peter Plastrik with Julia Parzen

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Innovation Network for Communities

USDN urban sustainability directors network

Urban Sustainability Directors Network Mission Statement
USDN's purpose is to be an active and engaged network of North American city sustainability directors who exchange information, collaborate to enhance our practice, and work together to advance the field of urban sustainability. USDN is a project of the Global Philanthropy Partnership. Much of what USDN produces is for members only. This report is available to the public. For further information about USDN, go to www.usdn.org.

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Introduction

The Urban Sustainability Directors Network (USDN), a project of the Global Philanthropy Partnership commissioned this report to help its members, partners, and others learn more about and assess the remarkable progress occurring in developing and spreading innovations in urban sustainability throughout North America. Practically everything about urban sustainability requires invention and insistent implementation, to move from the urgent need for change to on-the-ground actions. Accomplishing this is not up to municipal governments alone, but without the leadership, willingness to change, and creativity of local governments, the systemic urban transformation that is getting underway would be far more difficult. So much innovation is being introduced that it's easy to focus on particular trees and lose sight of the forest. But it's apparent that a comprehensive field of urban sustainability is emerging across the public, private, nonprofit, and academic sectors, and that innovation is its driving force. This report describes that emergence and some of its implications.

In order for a society to flourish, there must be a flourishing city at its core.
—Jane Jacobs

Since USDN's origin in 2009, its members have collaborated to help accelerate the development and spread of innovations, first exchanging information and learning together, then obtaining funding commitments to start an Innovation Fund and a Local Matching Sustainability Fund. New York City Mayor Michael Bloomberg refers to these types of efforts as the "positive ripple effect" that city actions can have around the globe.[1]

Often pushed by their citizens and driven by opportunity—or crisis—politicians and municipal staff are leading a global transformation of urban life the likes of which have not been seen since the Industrial Revolution.
—The Guide to Greening Cities

In the context of climate change and other challenges that urban sustainability seeks to address, and the enormous size and complexity of the urban systems that need to be transformed, these funds' financial resources are quite small. But more than money is involved. The funds enable urban communities to collaborate with each other on changes they want to make and encourage them to think big about how to leverage resources for greater influence. The funds support ingenuity, will, hope, and bonding. And they offer an opportunity to build and exercise a collective urban point of view about which urban-sustainability innovations matter and will find backing on the ground, where it matters most. Part of the work of the funds has been to help to continuously improve and enact this point of view—in alignment with partners in the funding community, other levels of government, cities beyond the network's membership, and the many engaged advocacy, community, and research organizations.

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The New Lay of the Land

The sustainable city—once an idea, an aspiration, an imperative, a challenge—is taking shape as a remarkably broad set of practices, policies, technologies, tools, programs, performance standards, and organizational models that are spreading throughout North America's cities, large and small, old and new, coastal and interior.

This growing momentum in urban sustainability responds directly to climate change, seeking to reduce the emission of greenhouse gases (GHG) and to adapt built and social systems to extreme weather, sea-level rise, *and* other now unavoidable alterations in climate. But it also embraces other important goals: sustainable economic development, equity, public health, quality of life, and more. Cross-sector coalitions—business owners and managers, environmental and community-based advocates and organizers, school systems, universities and academic researchers, concerned citizens, local government elected officials, managers, and employees, and local philanthropies and nonprofits—have emerged in cities and urban counties to forge pathways to sustainability. They have mobilized and aligned professional capacities, local political will, and public and private investment to pursue new ways to solve their communities' problems and take advantage of opportunities.

Not long ago, the idea of "urban sustainability" was pretty much unknown and the notion of "green cities" was considered oxymoronic at best. Cities mattered, of course, but suburban development and growth was where the economic action was. "Green" referred to lands far from the city, unmarred by the built environment and dense population. The difficulties of cities—housing, crime, pollution, and congestion, to name a few—seemed intractable, and cities themselves seemed more a part of the nation's problems than its solutions. Now, however, thriving cities are widely regarded as an indispensable element of national well-being and sustainability, central-city revival is an acknowledged fact, and when it comes to climate change urban areas are seen as a key part of the solution. "These are changing times," noted a *New York Times* article in July 2013. Cities "are increasingly finding new life and a fresh identity. . . The proof is on the streets. Downtowns are coming back where residents and cities are stressing public transit over cars, density over sprawl, diversity over suburban flight."[2]

Any path to a national sustainable future runs inevitably through the jurisdictions of cities, the dense and dynamic cores of metropolitan populations and economies, where also reside the essential systems of survival for housing, food, water, electricity, mobility, waste, and more. Of course cities can't by themselves create a low-carbon economy and sustainable systems, while also improving economic opportunity, quality of life, equity, and community resilience; but these national challenges won't be met without an urban transformation. And transformation requires leadership, a sense of urgency, and new solutions that are feasible and scalable.

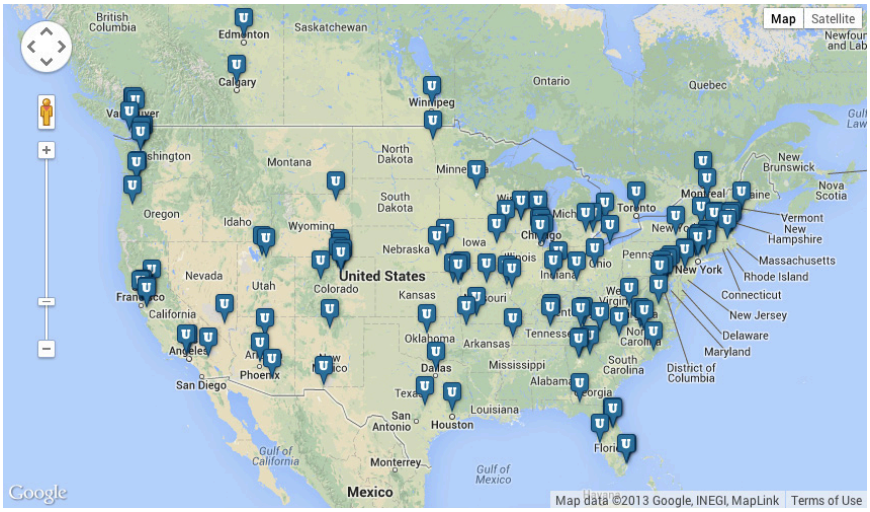
There is remarkable variation in what cities have been doing to become more sustainable. Some are inventing and testing innovations, others are busy adopting what's been shown to work. Some are focusing on particular urban systems, such as transportation, buildings, or waste, while others are working more broadly. Some have moved aggressively down the road toward ambitious GHG reduction, pioneering the way for others. Some have been early adopters of adaptation planning processes, while others are just beginning.

Taken together, though, this ragged edge of innovation and scaling—literally hundreds of novel solutions arising in hundreds of North America's urban areas—amounts to an emerging 21st century field of practice that is building on and reshaping established fields like urban

planning, place-based economic development, civil engineering, and municipal finance. In other words, urban sustainability has a critical mass of people and organizations that are linked and working in a variety of ways on common problems. They share values, vocabulary, information, literature, objectives, and tools. They develop knowledge, capacities, and systems for professional development, standards, and best practices. And they support experimentation and cross-pollination of thinking and practice. As a practice field, urban sustainability remains in an early stage of evolution, characterized by a proliferation of ideas and networks of practitioners. But it is maturing quickly, as practitioners and researchers converge around common methods and best practices, begin to integrate previously differentiated practices, and develop the capacities for widespread implementation and scaling.

A Cities' Point of View

This report offers a perspective on innovating for urban sustainability from the vantage point of the Urban Sustainability Directors Network (USDN), a peer-to-peer network of 120 municipal government sustainability professionals and 400 of their staff members in cities and counties in the U.S. and Canada. Since 2009 USDN members have exchanged information and collaborated to more quickly develop and share solutions that improve the natural and built environment, infrastructure, economy, health, and resilience of local communities. They increasingly provide a collective voice that informs funders, sustainability nonprofits, and other levels of government about what is needed and what works to achieve urban sustainability. Network members currently run dozens of user groups on sustainability topics; exchange ideas and tools through an information-sharing website, monthly idea-sharing calls, small group meetings and calls, and an annual meeting chock-full of workshops; lead eight regional networks of municipal professionals including more than 50 who are not USDN members; participate in two surveys annually of members' activities and priorities for urban sustainability; and collaborate with the C40 Cities Global Leadership Group. USDN partners with The Funders' Network for Smart Growth and Livable Communities in a Local Sustainability Matching Fund, supported by national and local foundations, with nearly $1 million granted to 20 projects. The Fund is designed to catalyze partnerships between local governments and local, place-based foundations, and to advance community-based sustainability initiatives.



USDN also operates an Innovation Fund guided by a 12-member Steering Committee that by the end of 2013 will have awarded nearly $1.2 million to more than 25 innovation development and scaling projects developed and led by teams involving some 70 different cities and counties. The Innovation Fund's 2013 strategic plan defined innovation as "a policy, practice, tool, program, performance standard, or organizational model" that is under development or being spread to help local governments "solve a problem or take advantage of an opportunity in urban sustainability."

The USDN perspective, gained from its members' on-the-ground efforts, network activities, especially the Innovation Fund's efforts, and their numerous connections with others work-

Toward an Innovation System

The Innovation Fund and Local Sustainability Matching Fund are building blocks for a broader, emerging innovation system for urban sustainability in which philanthropic funders, local, state, and national governments, nonprofit organizations, universities, and businesses collaborate on strategy and projects to accelerate the development and spread of transformative innovation. They have demonstrated that cities can and will provide leadership and resources for collaborative innovation and that relatively small inputs of flexible funding, guided by a group of engaged urban leaders, can influence many cities and communities of practice, leverage additional resources, and increase connectivity across the public, private, and nonprofit sectors and the many silos of local government.

ing on urban sustainability, illuminates four large-scale patterns in the content, processes, and capacities of innovation for urban sustainability:

1. **Innovation in urban sustainability is progressing through several fundamental shifts in focus:**
   - From greening cities environmentally to seeking triple bottom line impacts
   - From mitigation of carbon emissions to *both* mitigation and adaptation to climate change
   - From top-down, government and expert-driven approaches to a combination of approaches that engage community members and stakeholders
   - From grassroots advocacy to mainstream institutionalization

2. **Local governments are becoming proficient "innovation laboratories" for sustainability—using a set of key approaches to seek impact at scale:**
   - Data- and results-driven performance management
   - Public policy levers
   - Community-based approaches to fostering sustainable behavior
   - Partnerships with universities, businesses, and nonprofit organizations

3. **Local governments and partners have built a pipeline containing hundreds of sustainability innovations advancing through three stages of development and scaling:**
   - *Emerging* innovations that are being tested
   - *Core* innovations that are underway in many jurisdictions
   - *Advanced core* innovations that have spread widely

4. **Robust "innovation ecologies" for urban sustainability—complex meshes of relationships and collaborations crossing sectors and institutions—are emerging at the local level and linking to other capacities:**
   - Locally based networks of innovators connected to innovators elsewhere
   - Local governments playing key roles in building innovation capacities, especially in overcoming barriers to collaboration
   - Cities becoming more intentional about weaving cross-sector collaboration for innovation

Fundamental Shifts in Urban Sustainability Focus

Some of the initially defining characteristics of urban sustainability—greening the cities, reducing GHG emissions, and government planning for the future—have morphed dramatically. What began as a focus on environmental issues has become multi-dimensional—adding concerns about economic sustainability and equity. What began as an emphasis on GHG mitigation now includes adaptation to climate change and development of urban resilience. What began as mostly an expert- and government policy-driven approach to determining and implementing solutions is becoming an effort to engage community members and the private sector in envisioning a sustainable future, crafting a range of strategies, and embracing significant changes in behavior. And what began as grassroots advocacy has become a growing institutionalization of sustainability in local government.

There are two drivers behind these shifts: the inter-disciplinary nature of the sustainability paradigm and the growing experience of urban areas in the practicalities of reaching for sustainability.

In the paradigm, environmental performance matters, but it is inextricably tied to economic and social systems; environmental problems cannot be addressed without influencing and also impacting the economy and the society's lifestyle, especially its habits of consumption. From this fact arises a concern for triple bottom line performance—one reason that large working groups of USDN members are engaged in learning about how to build equity into sustainability initiatives and how to institute a Sustainable Economic Development (SED) approach in their communities. In July 2013 the USDN Innovation Fund agreed to support a SED project, proposed by nine cities and counties,[3] to produce an online suite of guidance/application reports and tools that will help sustainability directors (a) understand and explain the potential of SED approaches in their city/county economies and (b) effectively engage local elected officials, economic development professionals, business communities, and other audiences in increasingly adopting SED analysis and practices.

The experience of pushing for sustainability has bumped into several unanticipated realities. It became apparent that efforts to reduce GHG emissions would not be sufficient to prevent dramatic changes in climate, including an increase in extreme weather events, with potentially disastrous impact on urban areas. Thus, adaptation and resilience concerns arose. In a June 2013 survey, nearly 50% of USDN members said they were starting adaptation planning and an additional 15% were considering doing so in the next year or two. Although adaptation planning and strategies are different from mitigation approaches, leading-edge cities are working to blend the two into a comprehensive

"We have shifted from what was very much an environmental driver to a lot of it being driven by economics. We are trying to improve the efficiency of the local economy and keep more money local. There is a pretty strong health component too and quality of life." ***—Leslie Ethen, Tucson***

"A key driver is making the connection between protecting the environment and jobs, economy, and innovation. We need to keep showing you can have both a green and economically thriving community." ***—Melanie Nutter, San Francisco***

Know-How for Building Social Equity

Driven by its members' strong interest in the topic, USDN is conducting a growing number of activities to develop and advance social-equity practices, including:

- A scan of equity practices, led by Angela Park.
- A social-equity workshop and plenary session at the USDN 2013 annual meeting.
- Introduction of equity as a potential goal for proposals to the Innovation Fund in 2013.
- The Local Sustainability Matching Fund awarded $25,000 to Portland, OR, for a project to advance equity by integrating equity metrics, criteria, and implementation into the 2013 revision to the Portland/Multnomah County Climate Action Plan.

approach.

It also became clear that sustainability cannot be achieved without buy-in from community members, since they must agree with public policy changes and must change many of their own behaviors—reducing consumption as well as investing in efficiency and conservation. Thus, planning and decisions that didn't engage the public and key stakeholders in understanding the need for change couldn't deliver the results that cities wanted. "We can come up with wonderful technology," notes USDN member Nils Moe, senior aide to the mayor of Berkeley, California, "but if we can't get people to change their behavior at a very local level, we are sunk." From this realization arose efforts to engage neighborhoods and community organizations in new ways to deliver programs for energy efficiency and other sustainability initiatives, as well as efforts to improve public communication about sustainability and shape appealing messages. At the same time, what started as grassroots advocacy, often outside of local government, has become increasingly embraced and institutionalized by city hall. As a result, sustainability advocates inside and outside of government are coming to recognize the overlap and interconnections between their work and other, more traditional arenas for city policy and programs.

USDN members have been active in addressing these real-world situations. A Working Group developed a strategy for communications and messaging about sustainability and an ongoing Sustainable Behavior Working Group has initiated multiple projects, while several Innovation Fund awards have supported behavior-change programs. At the same time, the Innovation Fund has supported projects to advance the practices of adaptation planning and large-scale behavior change.

Adaptation Planning Innovation

An Innovation Fund grant is supporting 10 California cities in developing an effective approach to public-private, regional climate adaptation planning mandated by the state.

A Behavior Wedge-Assessment Tool

A five-city project, led by Charlotte, NC, is developing a low-cost means for providing cities with evidence and information for assessing the size of potential energy and carbon savings from behavioral changes in their cities and identifying the most promising behavior-change opportunities—launched with an Innovation Fund award.

Some Workshop Topics at USDN's 2012 & 2013 Annual Meetings

- Adaptation Planning
- Commercial Waste Reduction
- EcoDistricts
- Energy Efficiency Behavior Change
- Getting Utility Data
- Living Streets/Living City Blocks
- Mandatory Energy Disclosure
- New Waste Technologies
- Renewable District Energy
- Source-Separated Organic Material
- Sustainable Business Development
- Sustainable Economic Development
- Sustainable Urban Food Systems
- Sustainable Urban Water Systems
- Waste-to-Energy Capacity
- Zero-Carbon Buildings

Proficient "Innovation Laboratories" for Urban Sustainability

North American cities are getting better and better at developing and implementing innovations in urban sustainability—and their "laboratories for sustainability" are becoming networked together by institutions such as USDN. This remarkable progress can be seen through two lenses: the innovation-adoption curve and the performance-management sequence.

Although a small number of cities have gained prominence as inventors of sustainability solutions—either because of leadership, resources, or crises—it turns out that growing numbers of cities are initiating experiments and an even larger group is adopting solutions that are still in an early-stage of development. For instance, in a 2012 USDN survey 60 or more members reported progress on municipal fleet efficiency, LED/CFL outdoor lighting, renewable energy purchases, commercial recycling, green-building standards, green-business certification, car sharing, and 25 other actions. In a 2013 survey, at least 50 members were planning or starting to implement mandatory building energy disclosure; transportation demand management; smart metering; green-building incentives; rapid bus transit; "Living Streets"; and local green product procurement. These inventors and early adopters form the "front end" of the innovation-adoption curve for urban sustainability (with adoption by the majority forming most of the rest of the curve). The list of workshop topics for USDN's 2012 and 2013 annual meetings, based on expressions of member interest, reflects the appetite for and exchange of how-to information on a wide scope of early stage and proven practices.

Making a Difference

A March 2013 report to the Kresge Foundation found that "In a growing number of cities the political leadership and technical capacity has emerged and set a positive course. Cities are working with very limited resources in the face of huge intended impact… They have developed and implemented a remarkable repertoire of innovative policies, regulations, voluntary standards, programs, purchasing, performance indicators and monitoring, behavior-changing incentives, green and/or smart technologies, land-use plans, retrofitting initiatives, and more... In short, cities don't just matter when it comes to climate change; they are starting to make a difference."

—"Carbon-Neutral Communities Project" (http://carbonneutral.in4c.net/)

A different view of how municipal governments are implementing much of urban sustainability reveals progress in using a performance-management approach in which cities establish a vision and goals for sustainability, with indicators and metrics; plan strategies across departments and target measurable results; monitor their actual performance; and then figure out how to improve that performance. In this approach, setting measurable goals is particularly important because it creates a performance target for a local government and its departments (or a community), and this in turn allows for accountability for performance and continuous improvement. The predominant measurable goal in urban sustainability has been reduction of GHG emission levels, based on scientific analysis. While many cities have adopted GHG reduction goals (more than 1,000 mayors have signed the U.S. Conference of Mayors Climate Protection Agreement committing to meet or beat the Kyoto Protocol targets), USDN surveys reported that 52 cities/counties have established ambitious long-term goals (most of them seeking an 80% GHG reduction by 2050, the target set by scientists in 2007) and scores of cities have established GHG reduction goals for specific urban systems such as transportation, municipal operations, waste, and buildings.

To advance their efforts in performance management, cities have innovated in developing an array of tools for measuring and analyzing sustainability and supporting decision-making

processes. USDN Innovation Fund grants, for instance, have supported development of a Triple Bottom Line decision tool and building energy benchmarking methods. Related USDN learning and exchange activities have focused on planning for sustainability and adaptation, using sustainability indicators in communities, social marketing to drive large-scale behavior change, and institutionalizing sustainability in local government.

Cities are becoming a nationally distributed set of innovation laboratories for sustainability—engaging in innovation development for city systems and implementing performance management within local government. As they gain proficiency in this, networking institutions such as USDN become more important in helping cities to quickly find workable approaches, effectively collaborate on common problems, and spread the fruit of their efforts.

A Pipeline of Hundreds of Local Government Sustainability Solutions

Sustainability innovation proceeds along a remarkably broad front, advancing through three stages of development and scaling. USDN members consistently identify a large number of innovations that are "top priorities" for their communities' elected officials. In a 2012 survey 60 or more members said they were planning or implementing 39 of 84 innovative practices listed. In just the effort to transform urban transportation systems, North American cities are pursuing dozens of new practices: bike and car sharing, pedestrian networks and Complete Streets, electric vehicle charging stations, expanded rapid transit, freight logistics, Transit Oriented Development, applications of smart technology and Big Data analysis, and more. Add to these the changes underway in other urban systems—in waste, buildings, energy supply, food, economic development and finance, for example—and you get a sense of the activity that's been unleashed.

This creative chaos of policies, programs, and investments is, in fact, an innovation pipeline with a distinct process and the shape of a funnel. The innovation process usually starts with ideas, proceeds to design and testing, then working out the bugs and launching the innovation—and, finally, spreading what works. The pipeline acts as a funnel, wide at the front end, where concepts and prototypes enter, and narrow at the back end, where ideas that work—meaning they reliably produce repeatable results—emerge. Not every idea hits pay dirt; the funnel is where innovations live or die. Investing strategically in different urban-sustainability innovations at different stages of the innovation process can be guided by many factors: expert analysis, cost, access to financing, availability of implementation expertise, culture of the community, local political will, regulatory context, and more.

USDN, especially through the Innovation Fund and Local Sustainability Matching Fund, has worked to become increasingly strategic in its approach to innovation. A starting strength of the USDN approach has been to listen to its members' needs and priorities and let these shape funding considerations. This "bubbling up" from more than 100 communities provides a sense of not just what's needed, but also of what cities will be willing to try; it's a validation of demand. In addition to dividing potential innovation projects into two categories—developing or spreading innovations—USDN has used surveys to identify three different categories of innovations based on how many of its members are using them: emerging, core, and advanced core.

Innovation Category	Examples
Advanced Core (underway in three-fourths or more of USDN communities)	• Bicycle lanes, paths, routes • Municipal fleet efficiency • Residential recycling • Green building standards
Core (underway in about half of USDN communities)	• Complete Streets • Renewable energy purchasing • Residential building energy retrofitting • Sustainability indicators • Green business certification
Emerging (underway in about a third of USDN communities)	• Transportation demand management • Waste-to-energy capacity • Industrial building energy retrofitting • Smart energy grids

As the Innovation Fund Steering Committee concluded that USDN members were proving to be a unique collaborative asset for developing and spreading innovations in urban sustainability, it took several steps in 2013 to become more strategic in engaging with the innovation pipeline. It created an Advisory Committee comprised of seven people with deep expertise in certain areas, such as ecodistricts and adaptation planning, or a breadth of understanding about urban-sustainability innovation. Advisors will help the Fund to connect more deeply with specialized communities of practice that are advancing key urban sustainability policies and practices. The Fund also piloted a program to support "breakthrough convenings" that might accelerate the development or spread of an innovative practice and experimented with commissioning projects of strategic importance, starting with Sustainable Economic Development and adaptation planning. The Fund also began to invest in developing "system transforming road maps," analyses of the leading innovations in key urban systems. Finally, the Fund in its August 2013 Request for Proposals identified innovations that foster "integration of urban systems" such as linkages between transportation and land-use systems, and/or equity as a cutting-edge target for investment. At the same time, USDN developed a formal partnership with the C40 Global Cities to facilitate the exchange of information and best practices with cities around the world. This and other potential partnerships will help with both identifying important innovation opportunities and with scaling proven innovations.

Robust "Innovation Ecologies" for Urban Sustainability

Innovation is a team sport. Steven Johnson, author of *Where Good Ideas Come From,* describes the collaborative process that creates innovation as a "'liquid network,' where you have lots of different ideas that are together, different backgrounds, different interests, jostling with each other, bouncing off each other—that environment is, in fact, the environment that leads to innovation."[4] In the 21st century, cities are where liquid networks for sustainability innovation are found.

Local government often plays a crucial role in building these networks, but ultimately these must be cross-sector collaborations and capacities, built by local public, private, nonprofit, and academic partners, and linked to specialized communities of practice as well as multiple levels of government. As these capacities become stronger and better networked and take on more complex problems, they can form a broad ecology within a city landscape, with numerous interacting, aligned, collaborating, and interdependent people and organizations, and no single player in command. The ecology includes links to various local and national "communities of practice" in city innovation that are emerging in every niche of sustainability activity—specialized NGOs, advocates, researchers, and others who focus on specific innovations in specific urban systems, such as PACE financing for energy efficiency building retrofits or bicycle lane design or sustainability indicators.

Facilitating the development of this level of highly productive collaboration for innovation—with a tolerance for failure and sharing of credit—is no small task. Barriers to collaboration abound. A good example is the acquisition of data about energy consumption and climate change, both of which, if made easier, would accelerate important sustainability practicies. The first requires collaboration, rarely achieved to date, with utilities, and addressing competitive and privacy concerns as well as information-technology mismatches. The second, a problem of sufficiently localizing climate data so it can be used by communities for adaptation planning, requires collaboration across levels of government as well as with academic institutions. Another example of the collaboration struggle is the spread of "smart" technology. As Anthony Townsend reports, "The challenge ahead for building efficient, productive, equitable and sustainable cities . . . is navigating the competing interests of diverse stakeholders who have so much to gain and lose from the applications of smart technologies to urban problems."[5]

Few cities have been intentional enough about building their innovation ecologies, about weaving together different sectors' capacities into a whole that is greater than the sum of its parts. But USDN discussions and surveys reveal that municipal officials are well aware of the need for energetic collaboration locally and across distances to develop and implement innovations for urban sustainability. And through experience they are getting better at engaging partners in local and national communities of practice. This is an important step toward building full-scale innovation ecologies.

The Future of Sustainability Innovations

In 2013 USDN members predicted—crowdsourcing through a survey—the evolution of key innovative practices in urban sustainability based on a four-stage progression—from (1) concept to (2) proliferation of practices to (3) convergence around best practices to (4) standardized, widely used practices. During the next five years, respondents said, one practice area—building energy efficiency—will achieve standardization and widespread use. In the same timeframe, two other practice areas—sustainable transportation and waste prevention—will advance largely to the stage of best-practice convergence. The other practices identified in the survey will not have evolved this far. Adaptation, Sustainable Economic Development, sustainable food systems, neighborhood and district sustainability, comprehensive, cross-silo urban planning, and equity will still be mostly in the earlier stages of conceptual framing and proliferation of practices. Of these, equity will be the least evolved practice.

Recommendations

When a few visionaries in the late 19th century had a glimpse of what it might look like to plan the development of cities, they probably didn't anticipate that it would take decades to build urban planning into a standardized field of practice that is institutionalized in practically every local government. It took the development, piloting, and spread of numerous innovations, legal cases that went all the way to the U.S. Supreme Court, and the advent of professional training and certification systems. It took sustained leadership, effort, and creativity on the part of the true believers.

Now, of course, all of this stressful processing is occurring with urban sustainability, the 21st century reinvention of urban planning. In the past decade, innovations in urban sustainability have taken on a dynamic shape: Their scope has broadened from environmental concerns to the triple bottom line, from GHG mitigation to adaptation and resilience, and from top-down government planning to community engagement and large-scale behavior change. Their development has spread across an "edge of innovation" that includes inventors, early adopters, and later adopters and that is installing capacity for performance management. Their penetration of critical urban systems such as transportation, buildings, and waste varies significantly, as does the strategic investment in advancing innovations. And finally, the work itself is highly distributed and collaborative—requiring decentralized alignment that creates order without stifling creativity.

Where, in practical terms, is this heading? How long will it take? How can it be accelerated, spread, and deepened?

Urban sustainability is a work of decades, of a generation or two or three. But what happens down the road depends in large part on what enabling conditions are created today, not just which innovations receive investment or are implemented now. Accordingly, we offer the following general recommendations for action by the communities, funders, nonprofit and business enterprises, universities, state and federal governments:

1. **Municipal governments should use their collective voice to impact the development of the urban sustainability field.**

Cities are the ultimate "customers" for many urban-sustainability innovations, and they have many ways to share and aggregate their capabilities and understanding of their needs. They can:

- Provide expert resources to the designers of innovations and investments, including those in other levels of government.
- Pool their financial resources to invest in innovations and provide real-world, long-term test sites for innovations under development.
- Build long-term research and development partnerships with universities and businesses that are developing relevant innovations.
- Aggregate their purchasing power to influence the design and adoption of market-based innovations.
- Adopt a common set of sustainability performance metrics and city-sustainability rating systems.

- Establish sustainability-based professional development standards for local government positions.
- Join together to help the public, media, and opinion leaders to better understand and support innovations in sustainability.

USDN and a few other organizations have taken on some of these opportunities, but much more could be organized by urban communities and their allies.

2. Funders should expand and rationalize investment in urban-sustainability innovation, by creating funder collaborations and marketplaces for innovation investment.

The importance of philanthropic funding for advancing innovation in urban sustainability cannot be overstated. It provides smart, flexible, risk-tolerant capital. The maturing of the urban sustainability field—its growing applied knowledge and capabilities—offers foundations an opportunity to increasingly focus their investments on system-transforming opportunities and to support disciplined innovation processes. But this requires greater alignment strategically among foundations and between funders and governments at the local, regional, national, and even international levels.

One way to create stronger focus and discipline may be to bring together leadership foundations around specific, crucial innovation niches, such as adaptation and resilience planning, so they can adopt a shared strategy and pool their investments. Another niche ripe with necessity and opportunity is urban performance data for climate change and sustainability. The need is to access, standardize, package, and continuously update multiple, diverse sets of data and deliver them digitally, efficiently, and affordably to cities and their major investors—a service along the lines of what the Bloomberg terminal does for private investment professionals.

Another way to strengthen funder activity may be to establish funder marketplaces for matching innovation proposals with willing funders, using a disciplined Request for Proposals process to attract relevant proposals and a strong due diligence process to vet proposals. USDN and a few other organizations have made some headway in this direction. The Local Sustainability Matching Fund is an example of bringing local funders into a well-managed matchmaking marketplace. But, as in the first recommendation, more could be tried.

3. Federal and state governments should expand efforts to form "partnerships for sustainability" with local governments.

On a wide range of issues—energy supply, transportation, waste recycling, building energy efficiency, water system regulation, and others—the sustainability of urban communities depends on policy, program, and budget decisions of the federal and state governments and the sustainability of states and the nation depends on the performance of cities. Yet, the state of intergovernmental relations doesn't usually reflect these interdependencies. Instead, the federal government tends to work with the states and the intermediaries that advance cities' political agendas, and state governments weigh the interests of cities against those of suburban and rural interests. At the same time, partisan divides at different levels of government can stifle public policies that support urban sustainability.

However, there's an opportunity to build a different sort of relationship across the levels of government: partnerships in which experienced urban sustainability practitioners and innovators in cities provide federal and state agencies with road-tested technical information about what can and cannot work in metropolitan areas. This isn't the same as presenting a wish-list agenda. It's about building intergovernmental trust, at least with state and federal agencies that need or want to support urban sustainability, and then freely sharing ideas and practical knowledge. If trust can be built, then efficiency in sharing information can follow.

Partnerships of this sort might also tap the capacities of some of the national nonprofits that operate at the federal and state levels and are engaging in sustainability efforts.

USDN Members on Where Urban Sustainability is Heading

"Things that seem exotic or new, such as green infrastructure or regional rail, will be accepted as mainstream. You will see more of a convergence of sustainability with the market place."
—David Bragdon, New York City

"A key trend is the emphasis on diversity, access and equity. Sustainability and greening cities will be about equity and diversity and ensuring that all people are part of the dialog and empowered to make change."
—Jennifer Green, Burlington

"City greening and sustainability will be talked about by every city and every mayor. Every city will embrace them because they need to and because they want to. People are clamoring for a more livable city. For the first time in 30 years, an annual survey of Houston resident attitudes found that more Houstonians want to live in an urban environment than a suburban environment."
—Laura Spanjian, Houston

"We are redefining how public services can serve and sustainability principles like density, redevelopment, green infrastructure will transform the way cities look."
—Maggie Ullman, Asheville

"Sustainability will be less visible on its own because it is more integrated into how decisions are made. Environmental issues will be getter integrated with economic and equity issues."
—Michael Armstrong, Portland OR

"Sustainability will be something everyone understands and why government needs to play a role."
—Paul Young, Memphis

"Sustainability will be seen as a vital part of the city DNA."
—Roy Brooke, Victoria

"Budget constraints are driving new and interesting partnerships with companies and nonprofits. We will be doing a lot more through public private ventures and there will be a lot more integration across different functions, roles, and agencies."
—Celia VanderLoop, Denver

"The key driver will be ensuring that it is a long-term benefit for our citizens. People have to see how it will personally affect them."
—Vicki Bennett, Salt Lake City

Source: *The Guide to Greening Cities,* Island Press, October 2013.

About the USDN Innovation Fund (2009-2013)

The USDN Innovation Fund is a growing financial-investment resource governed by USDN members to promote collaboration among cities and advance the development of the urban sustainability field. A Steering Committee of 12 USDN members sets the Fund's goals and strategies and makes all decisions about grant awards. USDN contracts with an outside Fund Manager to staff the Committee's work.

The Fund is one building block for a broader, emerging innovation system for urban sustainability in which philanthropic funders, local, state, and national governments, nonprofit organizations, universities, and businesses collaborate on strategy and projects to accelerate the development and spread of transformative innovation. It has demonstrated that cities can and will provide leadership and resources for collaborative innovation and that relatively small inputs of flexible funding, guided by a group of engaged urban leaders, can influence many cities and communities of practice, leverage additional resources, and increase connectivity across the public, private, and nonprofit sectors and the many silos of local government.

The Fund assesses its performance on the basis of three metrics: increased ability to generate collaborative innovation activities among USDN members; increased potential quality of funded projects; and increased potential impact of Fund investments on the urban sustainability field. Of the completed Innovation grants awarded by the Fund:

- Five have been scans of particular systems in urban sustainability—food systems and waste systems—to develop strategy road maps/guidance documents that cities use to decide how best to leverage change in those systems.
- Three have been investments in the development of a specific innovation (financing for building energy retrofitting, a tool for assessing triple bottom line benefits of investments, and approaches for promoting electric vehicle use in cities).
- Eight have been for scaling up demonstrated innovations such as adaptation planning, commercial building energy disclosure policies, ecodistrict development, and community engagement methods.

As the Fund's financial resources have grown, so have its activities. In the 18 months beginning in December 2011, the Fund issued three Requests for Proposals and awarded a total of more than $530,000 to 14 projects. In 2011 it conducted the first of the annual innovation surveys of USDN members that guide the Fund's approach. In 2013 the Steering Committee created a five-year vision:

By 2018, the Fund's activities in urban sustainability will have:

- *Accelerated the on-the-ground impact of key practice fields*
- *Attracted a large amount of public, private and philanthropic investment in key innovations*
- *Positioned US and Canadian local governments as "go to" sources for innovation*

Accordingly, the Fund established a plan to increase the strategic leverage of its investments and expand the already large base of member-communities involved in a Fund innovation project. It decided to commission projects of clear strategic value, as long as a set of USDN members would develop and manage—champion—the project. The Fund also experimented with the use of convenings—meetings of the right people at the right time—to facilitate breakthroughs in a particular innovative practice.

	Innovation Fund Projects and Impacts (2009-2013)
Triple Bottomline Calculator Atlanta, Boston, Calgary	**Tool for calculating the economic, environmental and social return on investment for specific city projects.** More than 30 USDN members learned about the tool that was created. San Antonio adapted the tool for its own use. US EDA adapted parts of it for a public tool now in beta test (http://www.tbltool.org/). Knoxville and Milwaukee used the tool to advance their own decision tools and D.C., Fort Collins, and Philadelphia may also use it. Salt Lake City and Columbia are exploring using the new US EDA tool. More than a dozen additional members shared the tool with other staff in their cities.
Northeast Regional Electric Vehicle Partnership Boston, New York City, Philadelphia	**Strategy for using private garages to locate EV infrastructure and numerous ways to reduce permitting times and increase access to EV infrastructure.** In addition to completing goals for reduced permit times, increased EV infrastructure access, and strategy for using private garages, Philadelphia and New York City received $400,000 in federal grant support to expand their EV outreach, to continue the work of NREVP to create a social engagement strategy and for continued collaboration. A number of tools came out of the process that other cities are using. For example, a spread sheet tool for showing that range is not a problem for particular vehicles based upon past usage and a report on how to negotiate with utilities on dual metering to charge lower rates for night charging on EVs.
Midwest Regional Sustainability Network Ann Arbor, Dearborn	**A new network of small and medium sized communities in Michigan to sustain them through budget woes.** The MRSN built a vibrant network of about 40 Michigan cities, 38 of whom are not USDN members, focusing on stabilizing the base of support for sustainability and increasing the capacity for sustainability work at the local level. Participation in the network is strong and it has attracted two years of additional funding from the State of Michigan to continue. The hope was this would evolve to become a Midwest network, however Indiana joined an Ohio-Kentucky-Indiana network and Illinois formed its own network. The Michigan network is a replicable model for a statewide sustainability network.
The Inter-Mountain Regional Climate Adaptation Planning Alliance Boulder County, Denver, Flagstaff, Ft. Collins, Las Vegas, Park City, Salt Lake City, Tucson	**The creation of a new 7-city Southwest alliance and assembly of lessons for organizing regionally to advance adaptation.** As a result of project, the Western Adaptation Alliance, a regional network of sustainability directors, took shape and has expanded. It is one of the first US regional adaptation networks. The Western Adaptation Network received funding to continue its work, including from the Walton Foundation. Now the Cascadia region also is considering organizing its network around adaptation.

	Innovation Fund Projects and Impacts (2009-2013)
Community Social Engagement Guidebook and Case Studies Albany, Richmond	**Guide for cities on effectively using web-based social networking tools to engage community audiences in interactive and on-going exchange about community-wide sustainability.** In Albany and Richmond, other city departments have used the Guidebook to help them determine their goals for digital social engagement, the resources required and available and the best practices for particular goals. USDN held a webinar for 30 members on the guidebook, which was well received
Eco-Network Website New Haven, Omaha	**An open source website for galvanizing communities around implementation of a multi-project, multi-stakeholder sustainability plan.** The website was completed, but it did not achieve Omaha's intended goals (it has not been used much), New Haven's sustainability director left her job, and the Website has not spread to other cities.
Commercial Building Energy Disclosure Project Austin, Cambridge, Eugene, Minneapolis, New York City, San Francisco, Seattle, Washington DC	**A meeting to assemble lessons from early adopters of commercial building energy disclosure, prime the next 10 cities to launch, explore ways to address barriers, and initiate inter-city collaboration.** The 20 city sustainability directors who attended the workshop said it provided a model for USDN replication of best practices. Both Minneapolis and Boston passed disclosure policies after the meeting, with Minneapolis citing the meeting as a pivotal factor. One result (not just from this grant, but it probably helped) is that foundations are funding a project to help the next 10 cities pass mandatory disclosure policies and share lessons with other cities. Another result is that the USDN Innovation Fund Steering Committee created a new RFP for breakthrough convenings modeled on this grant.
Urban Agriculture Scan Columbia, Kansas City, St. Louis	**A scan of effective practices to advance urban agriculture and food systems, including policies, programs, and models.** University of Missouri Extension created a report and web site to host information sources, contacts, case studies, sample ordinances, etc., all organized around common themes and tagged with categories. The project process has influenced the three participating cities to increase dialogue between local urban agriculture advocates and government officials. The Institute for Sustainable Communities is working with the grantees to use findings to shape a future Leadership Academy. Members from Albany, Seattle, Milwaukee, Portland, Fayetteville, and Knoxville have used some of the findings to take action. Many more shared the project with other colleagues.

	Innovation Fund Projects and Impacts (2009-2013)
Urban Food Policy Scan Baltimore, Boston, Los Angeles, Louisville, Minneapolis, Portland, San Francisco, Seattle, Vancouver	**Report based on current practices surrounding municipal food policy programs provides a "road map" for cities considering a sustainable food program, allowing local governments to build on recent innovations and an emerging body of knowledge.** The USDN Food Systems User Group is hosting monthly conference calls based on the focus areas and evaluation criteria in the report. The report gave the group that created it more standing in the larger community of practice. Eight USDN members have acted on the report findings, including Austin, and twice that number has shared it with colleagues. Portland, one of the leading cities on food policy, reported a key learning that affects its approach. "We learned that programs have become much more successful when they have found champions in other bureaus and moved the work beyond mayor's office." The report has entered the flow of discussions in the food-systems practitioner community: Wholesome Wave, a food-systems NGO, has reproduced it. US Department of Agriculture staff have the report. The U.S. Conference of Mayors, which now has a food working group, is aware of the report and has referenced it in several discussions. Two webinars have used the report as source material. A big food-systems listserv had two references to it and a leading food-systems blogger blogged about the report. Institute for Sustainable Communities proposes to use results of USDN's urban agriculture scan grant to shape a new Urban Agriculture Leadership Academy.
Commercial PACE Los Angeles, San Francisco, Washington, D.C.	**Report based on survey of mortgage lenders identifies barriers to scaling up Commercial PACE programs and ways to address barriers.** The research conducted through the USDN Innovation grant has improved the way that the District of Columbia and other cities with PACE programs approach mortgage lenders when attempting to obtain consent for a PACE project. The most important impacts of the study are 1) the insight gained into ways to better approach lenders, 2) the outreach effort conducted to educate lenders about PACE, and 3) the understanding gained about the steps necessary to improve the odds of obtaining lender consent going forward. In addition to collecting data from lenders, the survey also served to educate lenders about PACE financing and engage a small group of mortgage lenders in a broader conversation. PACENow will drive action on recommendations, such as developing a common message about PACE when approaching lenders, and developing streamlined procedures for project approval, a Lender Toolkit, and a PACE project database.

	Innovation Fund Projects and Impacts (2009-2013)
Eco-Districts Austin, Bloomington, Boston, Denver, Memphis, Minneapolis NYC, Portland, San Francisco, Vancouver, Washington, D.C.	**With Portland Sustainability Institute, now renamed Ecodistricts – plan for Ecodistricts to meet the needs of cities across North America that want to create ecodistricts building on the Portland model.** The end product was an Ecodistricts planning document titled: "A North American EcoDistricts Program – Research and Program Design." Ecodistricts is raising funds to implement the plan developed with USDN resources. It already has supported 18 cities using the planning document. According to San Francisco members of USDN, who led this grant project, Ecodistricts helped their city launch its program and San Francisco will continue to stay involved in Ecodistrict's launch of a national program. Many USDN members are working with Ecodistricts on their first ecodistricts.
Food Systems & Urban Economic Development Portland, San Francisco, Seattle, Vancouver	**The report documented numerous aspects of food system development:** (1) the types of existing food-system-related economic development innovations and a description of the range of variations of each type; (2) tools cities can use to assess their current assets as well as gaps related to the food economy; (3) references to key data that cities can gather to determine local selection and adaptation of innovations; (4) the potential economic, environmental, and social impact of innovation adoption based on specific metrics, such as jobs created and their relative wages, locally owned businesses created or expanded, tax and sales revenues both locally and regionally, multiplier effects, and workforce development; and (5) the key tools and strategies, including physical infrastructure, regulatory measures, financial and technical assistance, marketing and promotions, necessary to support specific innovations and foster local, urban job growth, economic development, and sustainable food systems. The report findings included a summary of best practices as well as case studies. Finally, a description of key considerations, analytical and evaluation tools, and partners needed to form a comprehensive and locally specific plan for expanding a city's food sector were provided. More than 400 people signed up for the first webinar on the toolkit. One of the consultants, John Fisk, Director of Wallace Center at Winrock International, will present on the tool at the September 2013 ISC Leadership Academy on Urban and Sustainable Food Systems in Memphis.

Projects Still Underway Or Just Beginning	
Green Rental Housing App Austin, Berkeley, Bloomington, Burlington, Columbia, Dearborn, Evanston, Fayetteville, Iowa City, Lawrence, Madison, Oklahoma City	In many cities, the housing information available makes it difficult for renters to consider sustainability concerns such as utility usage, access to transportation, or the availability of recycling facilities, and to change their behavior accordingly. USDN members are developing a prototype web-based tool and, if appropriate, a Request for Qualifications to roll it out intended to (1) help renters, initially college students, consider sustainability factors alongside other factors (such as rent, access to laundry facilities, etc.) when making housing decisions and (2) to help landlords grasp the value of sustainability investments as a marketable asset. Bloomington is presenting on the tool at the USDN 2013 Annual Meeting.
Commercial Waste Scan Adams County (CO), Boulder, Boulder County, Cincinnati, Colorado Springs, Denver, Fort Collins, Houston, New York City, Salt Lake City, Santa Fe, Vancouver (WA)	Many USDN member cities have focused their solid waste reduction efforts on reducing residentially-generated solid wastes. Commercial waste typically makes up 45-55% of the waste stream, yet a majority of cities have not implemented commercial waste reduction programs. USDN members are producing a d a scan and roadmap that will allow jurisdictions to (1) better understand the predominant commercial waste streams, (2) consider the available strategies for reducing these waste stream components, (3) utilize decision criteria which consider factors such as infrastructure, community support, cost, and regulatory climate and (4) prioritize strategies to develop and implement plans to reduce commercial waste. We propose to develop a scan and roadmap for cities that will lead to actionable plans for implementing commercial waste reduction.
Compostable Plastics Toolkit Asheville, Gaithersburg, and San Jose	USDN members are developing a compostable plastics (CP) tool kit for municipalities that will clarify, educate, and offer public agencies policy direction on managing compostable plastics in local solid waste programs, including how-to guides for creating purchasing policies, educational materials for consumers & purchasers, and product compostability research findings.
New Waste Technologies Scan Austin, Dallas, Dearborn, El Paso, Houston, Iowa City, Loveland, Orlando, Philadelphia, Providence, San Jose, Washington DC	USDN Cities are constantly trying to reach maximum diversion at the absolute lowest overall cost and environmental impact. New technology and process systems are emerging in the U.S. and Europe that could redefine municipal solid waste (MSW) from a liability to a valuable asset. Some technologies and process systems claim to divert up to 80% of a waste stream without source separation, thus relying on technology to segregate what can be recycled from what is waste or residuals. USDN members are evaluating all innovative waste diversion methodologies to determine: unrealized potential (waste as an asset with value; availability of markets for recovered materials), increases in diversion rates, decreases in greenhouse gas emissions, flexibility in handling variability in feedstock composition and changing market conditions. This research will also include a cost-benefit analysis of waste to energy technologies, including digestion and other methane-creation systems. Houston is presenting on the tool at the USDN 2013 Annual Meeting.

Projects Still Underway Or Just Beginning	
Behavior Wedge Assessment Baltimore, Boston, Charlotte, Miami	Many USDN **c**ities have expressed a growing interest in implementing behavioral strategies for reducing energy consumption and carbon emissions but lack a low-cost, means of assessing the opportunities in their cities or determining how best to prioritize their efforts. USDN members already worked with Garrison Institute to develop a behavior wedge assessment framework for residential buildings. Now they are expanding the framework to include commercial buildings too and creating a set of city-specific behavioral profiles for residential and commercial buildings in participating cites. The model will allow cities to rank potential savings from behavior change campaigns related to specific energy end uses and types of buildings.
Building Energy Benchmarking Berkeley, Boulder, Houston, Oakland, Salt Lake City, San Francisco, San Jose	USDN members are developing an Office Building Benchmarking Guide for local governments to help local governments launch programs that promote voluntary energy benchmarking and recognition of energy performance in office buildings, with an emphasis on hard-to-reach Class B spaces.
Sustainable Economic Development Burlington, Charlotte, Denver, El Paso, Eugene, Oakland, San Francisco, Sarasota County, Victoria (BC),	The project will produce an online suite of guidance/application reports and tools that help sustainability directors to: (1) Understand and explain the potential of Sustainable Economic Development (SED) approaches their city/county economies. (2) Effectively engage local elected officials, economic development professionals, business communities, and other audiences in increasingly adopting SED analysis and practices.
LED Streetlights Ann Arbor, Dearborn, Bloomington	The convening will engage southeast Michigan communities, utilities and a wide range of stakeholders in a day long dialog about how to plan and finance the replacement of almost 200,000 energy inefficient and costly mercury vapor, high pressure sodium and metal halide street lights currently operated in southeast Michigan communities with high-efficiency LED street lights.
Smart Parking Strategies Albany, Burlington, Cambridge, Philadelphia	Parking management is one of the key challenges facing downtowns today. Poorly conceived zoning laws promote the proliferation of underutilized lots and garages. Pricing rarely correlates with market demands. Technology is available to improve customer experience, but it is rarely installed. Public and private lots, garages and street spaces abound, but rarely act in coordination to create vibrant spaces. This project will bring together parking and planning professionals from diverse cities interested in tackling universal barriers to smart parking strategies.

Projects Still Underway Or Just Beginning	
California Adaptation Planning in Regions Berkeley, Chula Vista, Hayward, Oakland, Richmond, Sacramento, San Diego, San Francisco, San Jose, Santa Monica	Green Cities California (GCC) will convene local government representatives from regional climate adaptation networks in California for the primary purpose of clarifying the most effective roles for local governments in regional public/private climate adaptation efforts.
Building Energy Benchmarking 2.0 Austin, Minneapolis, New York City, San Francisco, Seattle	In partnership with the Institute for Market Transformation the workshop will help cities with established programs ensure energy benchmarking and audit mandates result in realized energy savings. The convening will focus on creating common strategies for data management and market engagement to determine what cities need to share with building owners, the marketplace, and the public to see benchmarking and audit mandates turn into energy efficiency upgrades.
Adaptation Planning Grant Philadelphia, Salt Lake City, San Francisco, Seattle, Vancouver	Through research and a facilitated collaboration of cities and institutions working on climate adaptation, the project will produce: (1) An agenda and strategy to advocate for federal government support of cities in enhancing climate resilience through regulatory, grant, and technical assistance opportunities; and (2) A detailed proposal for a climate adaptation planning resource that provides local government staff and those that support their work a dynamic resource of vetted global best practices in adaptation planning. The detailed proposal will be used to develop partnerships with potential partners and funders.

About the Local Sustainability Matching Fund

The Local Sustainability Matching Fund (http://www.fundersnetwork.org/participate/green-building/local-sustainability-matching-fund/) is a collaborative effort of the Funders' Network for Smart Growth and Livable Communities, the Urban Sustainability Directors Network (USDN), Bloomberg Philanthropies, The JPB Foundation, John D. and Catherine T. MacArthur Foundation, Kendeda Fund, New York Community Trust, The Summit Foundation, and Surdna Foundation. The Fund is designed to make matching grants to catalyze partnerships between local governments and local, place-based foundations and to advance community-based sustainability initiatives.

- **Ann Arbor, Mich., $55,000** to build a Community Climate Partnership that brings together a cross-section of the community to implement the city's Climate Action Plan and fosters broader community involvement and civic action around climate change.
- **Appleton, WI: $60,000** to fund the first season of Riverview Gardens, a former 70-acre private golf course being transformed into a community-based urban farm, park, and job-training program that will engage the community in sustainable practices. www.riverview-gardens.org
- **Baltimore, Md., $50,000** to expand Groundswell's Community Power Program, which helps community institutions and low-income families access sustainable power, build connections, and save money on electricity bills.
- **Binghamton, NY: $50,000** to promote energy efficiency retrofits and to develop a task force to coordinate community engagement in the implementation of Binghamton's Energy and Climate Action Plan. (Stewart W. and Willma C. Hoyt Foundation)
- **Bridgeport, Conn., $50,000** for *Reservoir Community Farm: Urban Agriculture in Action*, a low-cost, privately-funded initiative designed to achieve important municipal sustainability outcomes, including supplying fresh, healthful local food to Bridgeport Public Schools.
- **Chattanooga, TN: $65,000** to integrate a mobile market system/pilot of delivering fresh and locally grown produce to low-income families.
- **Cincinnati, OH: $35,000** to create a regional sustainability funders' network, build the capacity of Green Umbrella, the regional sustainability alliance, and complete energy audits and retrofits. http://greenumbrella.org
- **Dubuque, Iowa, $55,000** to build new connections between the city's Sustainable Dubuque initiative and low-income families living in at-risk neighborhoods through a partnership with Dubuque's new Green & Healthy Homes Initiative.
- **Juneau, Alaska, $25,000** to increase electric vehicle use through infrastructure development and education, to increase sustainability and local hydroelectricity use, and to decrease emissions and high vehicle use cost.
- **Los Angeles, Calif., $50,000** to fund a position in the Los Angeles Mayor's office to lead and coordinate an inter-agency Transit Corridors Cabinet to facilitate transit-oriented planning and implement the recently adopted Transit Corridors Strategy and Workplan.
- **Louisville, Ky., $60,000** to develop an urban heat mitigation plan that will allow the city to build a robust community engagement program with elements targeted specifically to stakeholders in areas feeling the greatest urban heat impact and to undertake strategic project implementation in order to maximize resources.

- **Miami-Dade County, FL: $65,000** to catalyze community-led, community-funded healthy, environmental initiatives with an urban agriculture and health focus that support GreenPrint, Miami-Dade County's design for a sustainable future. http://www.miamidade.gov/greenprint/
- **Milwaukee, WI: $45,000** to support Midwest BikeShare, Inc., as it implements the Milwaukee BikeShare Demonstration Project, which will show how the city, funders, and community partners can work together to identify, fund, and implement sustainability strategies. (The Brico Fund)
- **Oakland, Calif., $40,000** to advance effective implementation of the City of Oakland's Energy and Climate Action Plan through a multi-stakeholder partnership between the City of Oakland, the Oakland Climate Action Coalition, and The San Francisco Foundation.
- **Portland, OR: $25,000** to advance equity by integrating equity metrics, criteria, and implementation into the 2013 revision to the Portland / Multnomah County Climate Action Plan. (Bullitt Foundation)
- **Providence, RI: $50,000** to support the Lots of Hope program, which will transform vacant, city-owned lots into thriving centers of urban agriculture and pilot small-scale composting in Providence neighborhoods. (Rhode Island Foundation)
- **St. Louis, MO: $50,000** to encourage and promote collaboration around local sustainability actions through the creation of a new sustainability funders network, development of a sustainable neighborhood toolkit of resources, and launch of a community awareness and engagement effort to promote implementation of the city's Sustainability Plan. (William A. Kerr Foundation, Incarnate Word Foundation, Trio Foundation of St. Louis, Greater Saint Louis Community Foundation, Lutheran Foundation of St. Louis, Saint Louis Regional Public Media, Inc., Commerce Bank)
- **Salt Lake City, UT: $25,000** to fund Clean Air Neighborhoods, a neighborhood-based social marketing campaign to help individuals negotiate barriers to alternative transportation.
- **Sarasota, Fla., $61,500** for the *Growing, Distributing and Learning about Fresh Produce: Community-Based Solutions for Nutrition and Sustainable Urban Food Systems* project, which will enhance access to, awareness about, and sustainable production of fresh produce through integrated community garden improvements, mobile produce delivery, and nutrition education.
- **Yonkers** and **New Rochelle, NY: $25,000** to support a joint project to create a training, marketing, and policy campaign for on-site leaf mulching that will reduce waste, cut greenhouse gas emissions, and generate cost-savings for property owners, landscapers, and taxpayers. (Westchester Community Foundation)

Notes

[1] Bloomberg quotation cited in Neal Peirce, Adam Freed, and Anthony Townsend, "Urban Futures: An Atlantic Perspective," (German Marshall Fund, 2013), 18.

[2] Michael Kimmelman, "Newark Revival Wears Orange Along the River," July 21, 2013, http://www.nytimes.com/2013/07/21/arts/design/newark-passaic-waterfront.html?hp&_r=0&gwh=46C2D0C8C2E62CFA9207A59D42C16828.

[3] SED project USDN members: Burlington VT, Charlotte NC, Denver CO, El Paso TX, Eugene OR, Oakland CA, San Francisco CA, Sarasota County FL, Victoria BC.

[4] http://www.ted.com/talks/steven_johnson_where_good_ideas_come_from.html.

[5] Anthony Townsend, "Smart Cities: Promise and Peril for Urban Policy and Planning in the Atlantic Basin" in "Urban Futures: An Atlantic Perspective," (German Marshall Fund, 2013), 88.