

CITIES

LABORATORIES FOR INNOVATION
IN SUSTAINABILITY



The primary laboratory of the 21st century for advances in the technology and social organization of environmental work will be the cities of the world. That is where problems are concentrated but also where the concentration of talent, money, and political influence exists to influence major change. To this day, our most substantive philanthropic contribution has been to the development of networks and organizations that are among the leaders in the developing field of urban sustainability.

Green Cities California was the first initiative to emerge from the gathering of sustainability directors at the 2006 Boulder meeting. The California cities that participated in the meeting were among the early pioneers of urban sustainability, and we hoped that as a group they would serve as a national model. GCC was the first network for which we provided the initial funds, and for which we provided a bit of prodding and tactical advice. The formation of USDN (Urban Sustainability Directors Network) was still a few years away; and by then, other funders had committed to the field.

Participants from the California cities wanted funding to develop a statewide network that would unite the northern part of the state with the southern part and allow them to meet with each other every year. California cities were beginning to hire sustainability directors; but as was the case nationally, their work was often done in isolation from one another. There had been an earlier attempt by cities from California, Oregon, Washington, and British Columbia to form a West Coast network, but funding limitations hindered their ability to engage in active peer-to-peer exchanges, and the effort never matured.

The founding cities — a group that included San Francisco, San Jose, San Diego, Santa Monica, and Pasadena — established a system of membership dues and decided to develop the network as a vanguard, rather than a mass membership, organization. Doing so, they realized, would allow them to focus most of their attention on documenting and sharing best practices rather than on the mechanics of growing the network. They would use the membership dues to cover basic operating expenses, which included a director, and would raise philanthropic funds to work on special projects. It was a model that seemed realistic; relying exclusively on annual proposals to foundations is never a sure bet.

Among their first actions was a statewide campaign to ban single-use plastic bags from grocery stores, which a few municipalities had already accom-

EARLY NETWORKS

GREEN CITIES CALIFORNIA



plished with local ordinances. But some municipalities that made the effort were sued for banning the bags without conducting a full environmental impact review (EIR). Since an EIR was prohibitively expensive for individual cities, particularly for the smaller ones, GCC commissioned a master environmental assessment (MEA) for California cities on the relative impacts of single-use paper bags, single-use plastic bags, and reusable bags. The assessment concluded, as expected, that reusable bags have far less of an environmental impact than either single-use plastic bags or single-use paper bags.

This was an early and catalytic move in what became a growing statewide campaign that led to a statewide ban on single-use plastic bags when Governor Jerry Brown signed Assembly Bill 270 into law in September 2014. By then, more than 120 local governments had passed ordinances with the assistance of GCC. The MEA that GCC had commissioned had provided a credible scientific basis for those ordinances. “This bill is a step in the right direction,” Brown said at the time. “It reduces the torrent of plastic polluting our beaches, parks, and even the ocean itself. We’re the first to ban these bags, and we won’t be the last.”

By then, according to a 2015 list compiled by the National Conference of State Legislatures, there were a number of states that had also passed different kinds of laws aimed at restricting the use of plastic bags in grocery stores, including Hawaii, Delaware, Maine, New York, North Carolina, New Jersey, and Puerto Rico. California was the only one that adopted a complete ban.

GCC ultimately stopped doing joint campaigns like the plastic bag ban. Its bigger role was as a nurturing ground for the development of a statewide network of sustainability efforts and, indirectly, on the national development of urban sustainability efforts. Their website, which has cataloged the variety of sustainability initiatives by member cities and provided examples of the ordinances they had passed to enact many of those initiatives, has been used nationally and internationally by cities that were setting up their own sustainability programs.

GCC experienced its first change of executive leadership in 2014 and is recognized as the most developed of the regional networks that evolved as part of USDN. Over the past few years, it has promoted the development of city climate action plans, a move that has put California cities ahead of most of the rest of the country. It has exercised influence on state climate policy in Sacramento and provided technical expertise and educational outreach to elected city and county officials in the early stages of the growing statewide

adoption of Community Choice Aggregation (CCA) as a legal basis for the development of municipal utilities that, over time, will expand the markets for renewable energy.

As the number of cities hiring sustainability directors grew, there was both need and opportunity to develop ancillary entities that would cultivate a broad field of practice.

When Steve Nicholas moved on to the Institute for Sustainable Communities (ISC) after several years as sustainability director of Seattle, he already saw the need for a mentoring academy in what had become a very complex working environment of policies, budgets, and jurisdictional domains. He wanted to use the power of peer learning to spur the development of the field. Steve had been among the most proactive of all the participants at the Boulder meeting in 2006: He formed a small group of cities that had been at the meeting that began sharing experiences and comparing notes on regular conference calls. That nucleus played a big part in the formation of USDN.

By the time USDN had its first national gathering in Chicago in September 2009, the number of sustainability directors around the country had grown significantly since the meeting in Boulder. Many of them were from a younger generation of professionals who were taking the challenge of environmental and social sustainability both seriously and to new levels. The field has continued to grow since then. By 2015, there were as many as 1,000 sustainability directors around the country, many more than the fewer than 150 cities that are among the vanguard that constitute the membership of USDN. There is also a growing galaxy of specialists in various issues areas, social media development, and various legal aspects of sustainability work.

Steve approached us for an initial grant to his newly formed Climate Leadership Academy, which is now called the Sustainable Communities Leadership Academy (SCLA) and is one of the Institute for Sustainable Community's leading programs. The day we approved the two-year grant to get them started, he was able to secure a larger grant from the Rockefeller Foundation and has since developed one of the leading urban sustainability educational academies in the country. It was an early example to us of how effective we could be as first funders in triggering the participation of larger funders, who often wait to see if an early initiative actually gets itself off the ground. From our initial grant and that of the Rockefeller Foundation, as well as an earlier commitment of funds provided by ISC to support his salary and minimal

DEVELOPING A FIELD OF PRACTICE

SUSTAINABLE COMMUNITIES LEADERSHIP ACADEMY (SCLA)

PEER LEARNING GROUPS IN URBAN SUSTAINABILITY DIRECTORS NETWORK IN 2015

Bike Sharing
Biodiversity
Building Energy Strategies
Carbon Neutral Cities
Climate Change Preparedness
Climate Mitigation/
Adaptation Nexus
District/Neighborhood Scale
Sustainability
Electric Vehicles
Equity & Access
Food Systems
Green Infrastructure
LED Street Lighting
Professional Development
Small Cities
Sustainable Behavior Change
Sustainable Consumption
Sustainable Economic
Development
Sustainability Director
Diversity
Sustainability Indicators
Urban Forestry
Urban Water Systems
Utility Data Access
Waste Diversion & Technologies

staff, Steve has been able to attract grants from other foundations that have provided ongoing support to his urban sustainability work.

SCLA specializes in what Steve has referred to as “nontechnical governance,” or the management of relationships between those who are doing the work. His academies have offered gatherings of a few days’ duration for interested cities; and from the start, they have been oriented toward the inclusion of other government departments and various civic partners who work on the urban sustainability agenda. As of 2015, it was a national program with a budget of close to \$5 million and a dozen staff members around the country along with various consultants. Steve’s team also now manages the Housing and Urban Development (HUD) sustainable cities program, which by 2015 consisted of some 300 cities, 20 nonprofits, and 140 grantees.

**THE INCREASING NEED
FOR COLLABORATION
SUSTAINABLE COMMUNITIES
LEADERSHIP ACADEMY (SCLA)
AND CONSENSUS BUILDING
INSTITUTE (CBI)**

As the field of urban sustainability grew, we decided to continue responding to funding opportunities, even though other funders who were larger and more committed to long-term developments were now providing the support and often moving the agenda.

Things were changing quickly. Darryl Young of the Summit Foundation, now one of the leaders among the funding community doing this work, pointed out in a conversation in late 2014 that the field was growing beyond the days of individual campaigns like the GCC’s plastic bag ban. Cities were now adopting systemic standards that allowed them to track their performance on a number of sustainability goals. The field was not only developing, but there were enough people and institutions involved to merit some criteria for performance.

The STAR system (Sustainable Tools for Assessing and Rating Communities), launched nationally in 2012, has been the most prominent. Developed over several years by ICLEI (the International Council for Local Environmental Initiatives) and the U.S. Green Building Council, it measures city progress by a community rating system that covers several areas, including the built environment, equity, health and safety, economy and jobs, and climate and energy.

Along with the need for data-driven measurement systems to offer coherence to a rapidly growing field of practice, there has been a parallel need to learn how to manage the complexity of urban environments. As more and more participate in the urban sustainability movement, and as municipal

areas grow and become increasingly complex conglomerations of multiple jurisdictional domains and overlapping authorities, the need for collaboration has increased. Steve Nicholas began hearing from a number of those participating in his academy workshops that they knew they needed to collaborate more but did not really know how. Much of this would come down to understanding the complexity of existing regulations and domains of jurisdictional authorities, and to basics such as memorandums of understanding and ways to reach compromise and agreement. This struck us as a development that would be essential to move things forward in a coordinated manner and to minimize the potential for haphazard progress.

Steve had been meeting with the Consensus Building Institute (CBI) at the Massachusetts Institute of Technology with the aim of integrating their deep knowledge of how to orchestrate collaborative processes into his own programs. CBI works with multiple parties that need to come to agreement on different issues, often over periods of many months, and has worked out a tested method for doing so over the past several years. We spent many months discussing how best to position a starter grant from us. By the time we offered the grant, Steve had developed an approach.

In ISC's partnership with the HUD network of sustainable communities, social equity and environmental issues were the driving concerns. Collaboration was not a major priority, at least at the beginning. HUD included a demand that grantees build consortia of varied interests into the grant, in recognition of the need for elected officials, bureaucrats, and those working with them to work together toward common ends. CBI was brought into the equation because of their expertise at the pivot point from planning to implementation of plans, which always involved collaboration between multiple partners. CBI offered some early clinics at selected SCLA gatherings, from which two cities — Knoxville and St. Louis — emerged as pilot projects for a collaborative process. We all wanted to make sure that the work would be done in cities other than San Francisco, Vancouver, or New York — that small group of cities already considered leaders in the field.

Knoxville and St. Louis had very different priorities for the plans they developed with the HUD grants. The Knoxville plan had been adopted by regional planning authorities, so Knoxville wanted some help in developing its relationships with those authorities. St. Louis, by contrast, wanted to hand more authority to its regional partners. Pat Field of CBI held a workshop with the Knoxville team and was able to provide them with a number of recommendations for how to proceed that would result in better memo-



Participants at an ISC Resilient Redesign Workshop in Southeast Florida. *Courtesy of ISC*

randums of understanding (MOUs) among participating partners, as well as other practical arrangements. Now, three-hour collaboration clinics are part of the larger SCLA gatherings, at which city teams identify collaboration challenges and get feedback on how to respond to them.

INCUBATING NEW INITIATIVES

ECODISTRICTS INCUBATOR

As the first few years passed, we became increasingly committed to supporting initiatives that would lead directly to action. When emergent initiatives that were multifaceted came our way, we wanted to find the action point that would translate aspirations into concrete achievements. We had also become attracted to the growing emphasis on innovation, more as a way to inspire further development rather than create something radically new.



In 2011, Rob Bennett of the Portland Sustainability Institute, which is now EcoDistricts, approached us with a request to help them extend the reach of their existing EcoDistricts initiative. First launched as a pilot program with the City of Portland, the Portland Development Commission, and Portland State University in 2009 to promote a new model of urban regeneration, the initiative emphasized equity, resilience, and climate protection. Rob was looking to introduce the model to other cities throughout North America. The EcoDistricts model provides an important scale for prototyping many of the approaches in building design, energy efficiency, transportation development, and waste management that are now at the core of urban sustainability work.

Rob and his team had started convening a national EcoDistricts Summit and wanted a complementary vehicle for turning ideas into actions that would change cities. One of those — the action point we ultimately funded — would become the EcoDistricts Incubator, a multi-day workshop with a selected group of cities in which they receive the help of varied experts in the field to develop their own district- and neighborhood-scale sustainability models and plans for execution. The concept made sense to us and seemed to provide a geographical model at the right scale for the rapidly multiplying strands of the urban sustainability movement.

City teams that present their plans at the Incubator pay a fee to participate, which has given the initiative a degree of financial stability; but EcoDistricts has not been able to generate the kind of donor support to follow up with individual cities and provide ongoing mentoring and consulting. They have developed a parallel program called Target Cities, which are those cities chosen as pioneering prototypes and supported by some of the same funders

who have been supporting other parts of the urban sustainability field. Some of the cities that unveil their projects at the Incubator then become target cities and receive support through that program — among them Cambridge, Denver, and Detroit; others find their own way.

EcoDistricts as a whole has more than doubled in size since 2012, growing from an organization with four staff members to one with eleven, and a budget that has increased from \$700,000 to \$1.8 million. They now have well over 800 people who attend their annual gatherings and trainings. Demand for and participation in the Incubator has grown. Rob notes that it has been “more successful than we ever imagined” as a place to launch new projects across the United States. It has become an essential umbrella for the rapidly diversifying neighborhood sustainability movement.

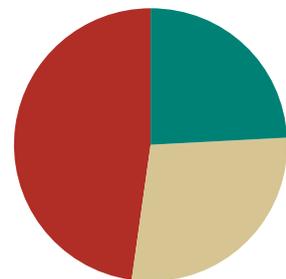
The building sector has been at the center of urban sustainability plans and their broad agendas to modernize cities, reduce the amount of energy consumed, upgrade a city’s overall aesthetic, and provide anchors to urban districts that want to build out a green-development agenda. One of the most successful movements in this field has been Architecture 2030, founded by architect Ed Mazria in Santa Fe, New Mexico. Architecture 2030 is not a membership group; rather it initiates projects and programs, and sets standards and guiding principles for transforming to a sustainable built environment that the building community is free to adopt.

Ed was a pioneer in solar architecture back in the 1970s and, at the urging of some younger staff in his architecture practice, began to research carbon emissions in buildings in the early 2000s. In 2003, he published an article in *Metropolis*, a leading design magazine, making the case that buildings, not automobiles, were the largest emitters of greenhouse gases. The architectural community was not initially very receptive; they did not want to be seen as polluters. But because the article was the cover feature, it became prominent news.

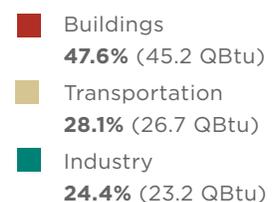
Architecture 2030 was formed in 2006 and soon released building sector energy- and carbon-reduction targets; within a month of the release, the American Institute of Architects (AIA) adopted the targets. Soon after, the U.S. Green Building Council and Green Globes followed suit, as did the U.S. Conference of Mayors. The federal government also adopted them for new federal buildings and major renovations. At that point, the targets — more stringent and specific than the comprehensive LEED guidelines — became industry standards for the green-building movement.

REVOLUTIONIZING THE BUILDING ENVIRONMENT

ARCHITECTURE 2030 DISTRICTS



U.S. ENERGY CONSUMPTION BY SECTOR, 2012



Source: Architecture 2030/
US Energy Information Administration

At the time, there was a growing public concern about carbon emissions, which many were coming to see as the main cause of global warming. Individual firms were signing on to the targets, and the State of California became the first state to adopt them. Many firms wanted to promote an energy- and emissions-reduction design ethic among employees as a way of getting them to be more ecologically responsible.

Architecture 2030's targets, which were incremental and were to be achieved by 2030, gave the professional design community something to work toward. Buildings also provided a tangible way of dealing with what, to many, seemed like an amorphous challenge, that of reducing carbon emissions coming from virtually every household, business, and motorized transportation device in the world. They provided enterprising and ecologically concerned architects and designers with a new set of worthy goals, which did not need government approval or support to implement.



In 2014, the International Union of Architects, consisting of professional organizations representing some 1.3 million architects around the world, adopted an Architecture 2030 initiative pledged to plan and design to meet low-carbon and carbon-neutral standards. Given the rapid growth of the human population and the prediction that an area equal to 60 percent of the current global building stock will be *added* by 2030 to accommodate that growth, the continuing adoption of the targets has the potential for a new design ethic with enormous implications for energy and emissions reductions in coming years.

Katie Hawthorne of Architecture 2030 approached us in the summer of 2013 with a request to support their Architecture 2030 Districts launch meeting in Pittsburgh in August of that year. A small group of cities wanted to start a movement to develop urban districts that would use the Architecture 2030 targets as a foundation to build out a broader agenda for building design and construction that would also promote the adoption of renewable energies and better management of water use. We were among a small group of funders that provided support to the gathering, which inspired architects

in other cities to develop their own 2030 Districts. The initial group of four cities that presented district plans at the launch soon doubled to eight, and has continued to grow to eleven today. By 2015, organizations in other countries were expressing interest in applying the 2030 District model, and the districts movement was presented at events in Paris at the COP 21 meeting in December of that year. Ed sees the gathering in Pittsburgh as a pivotal moment when the growing adoption of reduction standards transformed into an urban movement.

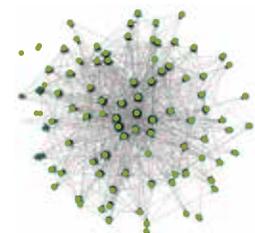
By 2014, the Urban Sustainability Directors Network was a much larger and deeper network than it had been just a few years earlier, a reflection of the broader growth of urban sustainability work around the world. Nils Moe, the new director, notes that there were just 15 sustainability directors at the meeting in Boulder in 2006, and that now there are over 140 in the USDN network. It has moved from a network of peer sharing — information, experiences, and basic camaraderie — to one based on an alignment of priorities and collaboration in which regional networks work on projects together. The network now includes specialized secondary staff in their user groups in addition to the sustainability directors, which cover as many as 25 different topic areas in which they share information and work toward common goals. Over the past several years, USDN has funded close to 30 projects in the network through their innovation fund, and they continue to refine how they measure and report on their collective impact. Sustainability directors have become what Nils characterizes as the “gatekeepers for innovation in cities.”

An increasing number of other government and civic entities are interested in USDN’s ability to broker productive relationships and help implement various initiatives. They include the Council on Environmental Quality at the White House, NRDC, NOAA, DOE, the Institute for Market Transformation, Smart Cities, C40, and GreenBiz. USDN’s partnership with C40 in the formation of the Carbon Neutral Cities Alliance, an international group of vanguard cities, now makes them part of a global organization.

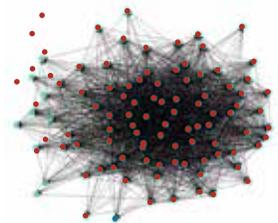
USDN, much like the broader field of urban sustainability, is what Nils Moe has called an “amazing amoeba that is shifting and evolving.” This state of fluidity has contributed to the need to develop ways to gauge its impact, assess the current state of the urban sustainability field, and help cities plan for their long-term climate commitments. All of this will be needed to respond to what USDN co-founder Sadhu Johnston refers to as a “tsunami of change” that will be confronting cities in coming years.

USDN AND THE FUTURE OF CITIES

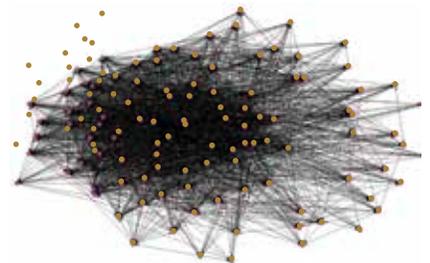
URBAN SUSTAINABILITY DIRECTORS NETWORK



2010



2014



2015

USDN CONNECTIONS

Source: USDN