The Quest for Sustainability: Key Principles for Action

Julia Parzen, JP Consulting
Sustainability is an Opportunity

1+1 = 3

**HOUSTON**
“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.”—Laura Spanjian, Sustainability Director, City of Houston

**DUBUQUE**
“Cities that get out in front on sustainability will have competitive advantages in the future.” Mayor Roy Buol, City of Dubuque
USDN is an active and engaged network of 136+ North American city sustainability directors who exchange information, collaborate to enhance our practice, and work together to advance the field of urban sustainability.
Members Co-Develop and Spread Ideas

<table>
<thead>
<tr>
<th>Year</th>
<th>Avg # Ties</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>8</td>
</tr>
<tr>
<td>2010</td>
<td>19</td>
</tr>
<tr>
<td>2011</td>
<td>26</td>
</tr>
<tr>
<td>2012</td>
<td>31</td>
</tr>
<tr>
<td>2013</td>
<td>32.8</td>
</tr>
</tbody>
</table>
... And Capture Lessons, as in “The Guide to Greening Cities”

“Capturing our collective ideas and best practices in The Guide to Greening Cities will help cities learn from one another’s successes and avoid one another’s failures.” - Mayor Michael Nutter, City of Philadelphia

“Think of this book as a peek inside the machinations of local government and guide to getting things done pragmatically, yet with vision.” -- Kaid Benfield
Many Cities are Choosing Transformation...

“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, Past NYC Sustainability Director
10 Tips for Fostering Sustainability From Within Local Government

1. Empower a champion
2. Work to achieve a triple bottomline/break down silos
3. Focus and align
4. Lead by example
5. Build relationships
6. Be an enabler
7. Cultivate leaders
8. Share stories and credit
9. Measure and report
10. Tap into competitive instincts
1. First You Need a Champion

Top Knowledge Areas

- Sustainability Frameworks
- Energy Planning/System Design/Management
- Public Finance and Budgets
- Social Behavior Change
- Public Administration

Top Skills

- Public Policy Analysis, Development, Advising, Advocacy and Legal Challenges
- Program/Project/Initiative Design and Management
- Organizational Planning/Development and Culture of Change
- Facilitation of Collaborative Process
- Leadership Development

USDN Professional Development Toolkit
http://usdn.org/public/Innovation.html
2. Work to Achieve a Triple Bottomline

“The good news is that we see the silos breaking down. Motivated in part by constrained resources but also by the realization that complex, multidimensional challenges require sophisticated, holistic solutions, people and institutions are coming together in extraordinary and innovative ways to pool ideas and resources and develop integrated solutions at appropriate scales.”

-- Steve Nicholas, Institute for Sustainable Communities Vice President of US Programs and past Director of the City of Seattle Office of Sustainability and Environment (and co-author of the US Mayors Climate Protection Agreement)
Leveraging Co-Benefits: Philadelphia Green City Clean Waters

<table>
<thead>
<tr>
<th>Benefit Categories</th>
<th>50% LID Option (Green)</th>
<th>30’ Tunnel Option (Gray)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased Recreational Opportunities</td>
<td>$524.5</td>
<td></td>
</tr>
<tr>
<td>Improved Aesthetics/Property Value</td>
<td>$574.7</td>
<td></td>
</tr>
<tr>
<td>Reduction in Heat Stress Mortality</td>
<td>$1,057.6</td>
<td>$189.0</td>
</tr>
<tr>
<td>Water Quality/Aquatic Habitat Enhancement</td>
<td>$336.4</td>
<td></td>
</tr>
<tr>
<td>Wetland Services</td>
<td>$1.6</td>
<td></td>
</tr>
<tr>
<td>Social Costs Avoided by Green Collar Jobs</td>
<td>$124.9</td>
<td></td>
</tr>
<tr>
<td>Air Quality Improvements from Trees</td>
<td>$131.0</td>
<td></td>
</tr>
<tr>
<td>Energy Savings/Usage</td>
<td>$33.7</td>
<td></td>
</tr>
<tr>
<td>Reduced (Increased) Damage from SO₂ &amp; NOₓ Emissions</td>
<td>$46.3</td>
<td>($45.2)</td>
</tr>
<tr>
<td>Reduced (Increased) Damage from CO₂ Emissions</td>
<td>$21.2</td>
<td>($5.9)</td>
</tr>
<tr>
<td>Disruption Costs from Construction &amp; Maintenance</td>
<td>$(5.6)</td>
<td>($13.4)</td>
</tr>
<tr>
<td>Total</td>
<td>$2,846.4</td>
<td>$122.0</td>
</tr>
</tbody>
</table>
...Not Just a Bigger City Strategy

Batavia, IL Green Infrastructure; Revitalized Downtown
Population: 26,000
Energy Efficiency = Cost Savings
Recycling Savings in Ann Arbor Energy Office

Annual Energy Savings vs Project Costs

- Energy Project Savings
- Energy Purchase and Labor Savings
- Project Revenues
- Grants
- Project and Labor Expenses

Funding
## Inland Empire Climate Action Co-Benefits

<table>
<thead>
<tr>
<th>High-Impact Local Climate Action</th>
<th>Co-Benefits</th>
<th>Assets/Opportunities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building Energy Efficiency</td>
<td>Quality of Life, Energy Cost Savings, Affordability; Branding</td>
<td>Local Utility Programs; $80 million Cap and Trade Funds, 100s of LEED Buildings</td>
</tr>
<tr>
<td>LED street Lights</td>
<td>Lower City Energy and Maintenance costs</td>
<td>Joining together to lower purchasing costs</td>
</tr>
</tbody>
</table>

**Building Energy Efficiency**
- Quality of Life
- Energy Cost Savings
- Affordability
- Branding

**LED street Lights**
- Lower City Energy and Maintenance costs

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**Bicycle Infrastructure**
- Quality of Life
- Branding
- Strong Universities
- Riverside County Safe Routes Grant

**Traffic Signal Coordination**
- Reduced Congestion
- Increased Freight Efficiency
- Dominance in logistics, manufacturing and construction

**Water Conservation and Efficiency**
- Parks, Recreation
- Water Quality
- Riverside County Ordinance

**Transit Oriented Development**
- Improved Housing Affordability
- Attracting Educated Migrants
- New Lines
- Local interest in TOD
- Growth in professionals
- Available sites around commuter rail
- Self Help
3. Focus and Align

You Need:
• Goals
• A Plan,
• A Way to
• Measure Progress
Build on Current Initiatives and

Clean City’s Clean & Green Task Force
Look for Quick Wins (Maybe)
USDN Examples of Big Results with Few Barriers

<table>
<thead>
<tr>
<th>Category</th>
<th>Frequency</th>
<th>Popular Sub-Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td>municipal building efficiency</td>
<td>15</td>
<td>performance contracting (3), retrofits (3), school (1), natural gas (1), ESCO (1), LED lights (1)</td>
</tr>
<tr>
<td>energy production</td>
<td>9</td>
<td>landfill gas (3), solar (4), anaerobic digestion (1), energy-from-waste (1), heat recovery (1)</td>
</tr>
<tr>
<td>lighting upgrades</td>
<td>8</td>
<td>traffic signals (3), street lights (5)</td>
</tr>
</tbody>
</table>
Copy Nearby Successes

- **LA LED Streetlight Conversion**: LA has completed the world’s largest LED streetlight retrofit, saving $7 million a year in energy costs and $2.5 million a year in maintenance costs.

- **Riverside Solar**: The city has seen a 1 MW increase in solar PV projects each year since 2009. 1 MW = powering 650 homes.

- **Tucson Commercial Rainwater Harvesting**: In 2008 Tucson adopted the first ordinance for new commercial construction to harvest 50% of rainwater.

- **Phoenix Environmentally Preferable Purchasing Resolution**: The strategy has achieved cost savings and environmental benefits.
4. Lead by Example

Chicago Green Roofs and Alleys
Help Each Other: Asheville LED Streetlights

- Asheville LED Streetlights Case Study
- Shopped by Dearborn
- To Ann Arbor and Bloomington
- Agreement with Utilities for Phased Upgrades
- SE Michigan Regional Energy Collaborative
- Approved Innovation Grant
- NC Regional Energy Collaborative
5. Build Relationships and Partnerships

“To advance urban sustainability, we have to get it out into the culture of the community. Residents, neighborhoods, blocks, and businesses small and large. Public private partnerships. Bringing people together to collaborate on ideas, but also pool resources and dollars. To really move forward, we have to partner even more.”

-- Brendan Shane, Director of Sustainability, Washington D.C.

“In the next five years, 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, City of Denver
Partner with Anchor Institutions: Phoenix TOD Partnership

Reinvent PHX is a collaboration between the City of Phoenix, HUD, Arizona State University, St. Luke’s Health Initiatives and local organizations to develop sustainability action plans for each station area. It has the support of many local developers.
Act Regionally: Cincinnati Green Umbrella

To maximize the collective impact of individuals and organizations dedicated to environmental sustainability; to improve economic vitality and quality of life in the region around Cincinnati through

1. Common Agenda
2. Shared Measurements
3. Mutually Reinforcing Activities
4. Continuous Communication
5. a Backbone Organization
6. Be An Enabler

Source: Vancouver Greenest City Action Planning
Use Underutilized City Land to Enable

Providence, RI, Lots of Hope
Use Data to Enable: Seattle Building Energy Disclosure

Multifamily and non-residential buildings 20,000 square feet (SF) or greater must benchmark, report, and disclose upon request.

<table>
<thead>
<tr>
<th>Building Type &amp; Size</th>
<th>Reporting Deadlines &amp; Data Required</th>
<th>Compliance Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Residential ≥ 50,000 SF</td>
<td>April 1, 2012 (2011 data)</td>
<td>89%</td>
</tr>
<tr>
<td>(~710 buildings)</td>
<td></td>
<td>129.1 million sf</td>
</tr>
<tr>
<td>Multifamily ≥ 50,000 SF</td>
<td>October 1, 2012 (2011 data)</td>
<td>97%</td>
</tr>
<tr>
<td>(~590 buildings)</td>
<td></td>
<td>76.6 million sf</td>
</tr>
<tr>
<td>Non-Res &amp; Multifamily ≥ 20,000 SF</td>
<td>April 1, 2013 (2012 data)</td>
<td>95%</td>
</tr>
<tr>
<td>(~3200 buildings)</td>
<td></td>
<td>270.4 million sf</td>
</tr>
<tr>
<td>Non-Res &amp; Multifamily ≥ 20,000 SF</td>
<td>April 1, 2014 (2013 data)</td>
<td>94%</td>
</tr>
<tr>
<td>(~3250 buildings)</td>
<td></td>
<td>268.7 million sf</td>
</tr>
</tbody>
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7. Cultivate Leadership
“Six Powerhouse Food Policy Councils Driving Local Food in Cities”

- Seedstock, August 4, 2014.

- Cleveland, Ohio: Cuyahoga County Food Policy Coalition
- Baltimore, MD: Baltimore Food Policy Initiative
- Knoxville, TN: Knoxville-Knox County Food Policy Coalition
- Austin, Texas: Sustainable Food Policy Board
- Los Angeles, CA: Los Angeles Food Policy Council
- Milwaukee Food Council

- Cleveland Area Coalition
  - Vacant Land Inventory
  - Urban Garden District Zoning
  - Farm Animals and Bees Policy
  - Urban Agriculture Overlay District zoning policy
  - Water Policy Legislation

- Result: Ag production emerging throughout Cleveland and Suburbs
8. Measure and Report

Downtown Vancouver, 1996-2011
(Peak Periods: 7-9am, 11am-1pm, 3-6pm)

- Cycling: Increased 180% from 1994 to 2004
- Walking: Increased 44% from 1994 to 2004
- Transit: Increased 50% from 1999 to 2009
- Gasoline Sales: Decreased 7% from 1999 to 2008
- Vehicle Trips: Decreased 10% from 1995 to 2005

- People Entering Downtown: 1996 - 25,000; 2001 - 25,000; 2006 - 25,000; 2011 (estimate) - 25,000
- Motor Vehicles Entering Downtown: 1996 - 50,000; 2001 - 60,000; 2006 - 100,000; 2011 (estimate) - 150,000
- Population: 1996 - 50,000; 2001 - 60,000; 2006 - 75,000; 2011 (estimate) - 100,000
- Jobs: 1996 - 50,000; 2001 - 60,000; 2006 - 75,000; 2011 (estimate) - 100,000

- Population: +75% from 1996 to 2011
- Jobs: +26% from 1996 to 2011
- People Entering Downtown: +15% from 1996 to 2011
- Motor Vehicles Entering Downtown: -25% from 1996 to 2011
9. Share Stories and Credit

“Carve out the doable. Measure success and failure. Over-communicate with the organization. And, most important, recognize achievement.”

-- John Stokes, City of Fort Collins, CO
10. Tap Into Competitive Instincts

“It has been inspiring to see the Chicago Green Office Challenge grow from a simple idea of a friendly competition to engage Chicago businesses, into a meaningful driver of environmental footprint reduction in cities across the U.S.”

Yalmaz Siddiqui,
Senior Director of Environmental Strategy, Office Depot
Get and Give Recognition

California Green Communities challenge promotes action by cities to create sustainable future by addressing 10 areas that touch every aspect of community life and have the potential to significantly reduce energy use and carbon emissions.

ICLEI Green Business Challenge promotes action by businesses.

http://www.icleiusa.org/climate_and_energy/green-business-challenge

Engage your business community in local sustainability priorities that save money, energy, and resources with a friendly competition powered by ICLEI’s frameworks and toolkits.
Bonus Point: Don’t Let the Perfect Be the Enemy of the Good

“We overestimate what we can achieve in one year and underestimate what can be done in five …”
http://guidetogreeningcities.org/


www.juliaparzen.com