SUSTAINABILITY AS AN ECONOMIC DRIVER

Julia Parzen
Urban Sustainable Directors Network (USDN)
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TALES FROM 100 USDN CITIES AND REGIONS
Three Stages of Sustainability

• **Sustainability 1.0** – Focused on environmental protection.

• **Sustainability 2.0** – Focused on climate action and greenhouse gas reduction.

• **Sustainability 3.0** – Focused on sustainable economic development that makes the market an ally in producing economic prosperity and environmental quality.

*Source: Innovation Network for Communities and Global Urban Development*
Sustainability 3.0 is About Regions

And Micropolitan Areas Can Compete with Major Metros

Micropolitan Area

Metropolitan Area
Sustainability 3.0 is About Land Use

Urban And Rural Wealth-creating Knowledge Workers Are Attracted To Communities With A “Soul,” A “Sense Of Place”

Source: Gallup and the John S. and James L. Knight Foundation Knight Soul of the Community, interviewing close to 43,000 people in 26 communities over three years, found that the main qualities that attach people to place are
(1) Social offerings, such as entertainment venues and places to meet,
(2) Openness (how welcoming a place is),
(3) Area aesthetics (its physical beauty and green spaces)

Communities with these soft facts often are mixed-use, human scale, walkable neighborhoods.

Communities scoring well on these soft factors have higher local GDP.
Sustainability 3.0 is About Performance

Impact Areas
- Air
- Water
- Material Resources
- Energy
- Transportation
- Land
- Food
- Community Vitality

Normalizing Indicators
- Equity
- Economy
- Wellness

Key Sustainability Indicators

Sustainable Atlanta Indicator Framework
Sustainability 3.0 is About Markets

Build Local and Regional Sustainability Demand
Use policies, incentives, investments and behavior changes to build demand for sustainable practices, products and services and attract knowledge workers.

Build the Local and Regional Sustainable Business Base
Support the creation, development and attraction of sustainable businesses and clusters.
1. Clean Tech Cluster Development
2. Clean Tech Technology Transfer
3. Clean and Green Tech Business Attraction and Expansion
4. Sustainable Finance
5. Sustainable Branding and Marketing

Build New Skills and Engage the Community
Build skills for the sustainable economy and engage communities in the process.
1. Green Talent Systems
2. Link Benefits to Communities
3. Sustainable Community Education and Engagement

Source: Innovation Network for Communities

http://usa.nupolis.com/docs/Sustainable%20Economic%20Development%20Final%2006%2024%202010.pdf
Regional Organizing Models

Source: Climate Prosperity Project
The Portland Metro Climate Prosperity Project
Regional Organizing Models

Brookings Institution

THE METROPOLITAN BUSINESS PLANNING PROCESS INVOLVES THREE MAJOR STAGES

1. METRO DEVELOPMENT BASELINE OVERVIEW (MDBO)
   - MISSION/VISION
   - MARKET ANALYSIS
   - GOALS
   - STRATEGIES

2. DETAILED DEVELOPMENT INITIATIVE (DDI)
   - PRODUCTS, POLICIES, PROGRAMS, INTERVENTIONS
   - ORGANIZATIONAL AND OPERATIONAL PLAN
   - FINANCIAL SOURCES AND USES
   - PERFORMANCE METRICS

3. METROPOLITAN INVESTMENT PROSPECTUS

Source: RW Ventures and the Brookings Institution

www.brookings.edu/metro
Employment and Projected Growth

- Residential Building Construction, 15,100
- Nonresidential Building Construction, 13,200
- Engineering Services, 16,700
- Architectural Services, 5,700 jobs
- Electric Lighting Expnt Mfg, 60
- HVAC & Comm Refrig Expnt Mfg, 570
- Semiconductor & Related Device Mfg, 200
- Automatic Env'l Control Mfg for Res, Comm, & Appliance Use, 150
- Household Appliance Mfg, 570

2008 Employment Concentration Ratio, U.S. Avg = 1.0

Projected Avg Annual Growth Rate, 2007-2017
## RMLUI Sustainable Community Development Code Framework

<table>
<thead>
<tr>
<th>Environmental Health &amp; Natural Hazards</th>
<th>Community Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Climate Change</td>
<td>- Public Participation</td>
</tr>
<tr>
<td>- Low Impact Development</td>
<td>- Community Health and Safety</td>
</tr>
<tr>
<td>- Natural Resource Conservation</td>
<td>- Affordable Housing</td>
</tr>
<tr>
<td>- Water Conservation</td>
<td>- Housing Diversity and Accessibility</td>
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<tr>
<td>- Solid Waste and Recycling</td>
<td>- Food Production and Security</td>
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<tr>
<td>- Floodplain Management</td>
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<td>- Wildfires</td>
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<table>
<thead>
<tr>
<th>Land Use &amp; Community Character</th>
<th></th>
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<tbody>
<tr>
<td>- Character and Aesthetics</td>
<td></td>
</tr>
<tr>
<td>- Urban Form and Density</td>
<td></td>
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<tr>
<td>- Historic Preservation</td>
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</table>

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<thead>
<tr>
<th>Mobility &amp; Transportation</th>
<th></th>
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<tbody>
<tr>
<td>- Transit Oriented Development</td>
<td></td>
</tr>
<tr>
<td>- Complete Streets</td>
<td></td>
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<tr>
<td>- Public Transit</td>
<td></td>
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<tr>
<td>- Parking</td>
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</table>

**Coming Soon...**

- Information and Communications Technology
- Ecosystem Services

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**Energy**

- Renewable Energy: Wind
- Renewable Energy: Solar
- Energy Efficiency and Conservation

**Livability**

- Noise
- Lighting
- Aesthetics
Neighborhood Organizing Models: EcoDistricts, Green Impact Zones, & Living City Blocks

- Water
  - District wastewater
  - Water reuse
  - Stormwater infiltration

- Energy
  - District energy
  - Smart grid
  - Demand management
  - Transit, cycling and pedestrian infrastructure
  - Demand management
  - EV

- Transportation
  - Construction reuse & recycling
  - Solid waste reuse & recycling
  - Toxics reduction

- Waste
  - Habitat
  - Edible landscapes
  - Food production

- Ecosystem Function
### Measuring Performance
**STAR Community Index**

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Goal</strong></td>
<td>Title of desired outcome that a jurisdiction intends to achieve</td>
</tr>
<tr>
<td><strong>Purpose</strong></td>
<td>Statement to clarify relevance, provide context, and communicate the desired outcome.</td>
</tr>
<tr>
<td><strong>Validation Measure</strong></td>
<td>Performance Measure: Verifiable indicator or metric, qualitative or quantitative, representing the actual state of a system and used to identify progress relative to a Goal. OR&lt;</td>
</tr>
<tr>
<td></td>
<td>Practice Measure: Actions, practices or systematic approach proven to be efficient and effective toward achieving the Goal.</td>
</tr>
</tbody>
</table>

**Environment**—Ex. Natural Systems—Ex. Green Infrastructure  
**Economy**—Ex. Economic Prosperity—Ex. Market Development  
**Society**—Ex. Education, Arts & Community—Ex. Civic Literacy & Engagement
Measuring Performance
USDN/Boston Triple Bottom Line Manual
Sustainable Infrastructure Investment

I. Green Infrastructure Valuation

- Shows how green infrastructure practices can produce different combinations of benefits
- Places an economic value on the numerous benefits provided by green infrastructure
II. Performance-Based TOD

Performance-Based Transit-Oriented Development Typology Guidebook

What factors can lower VMT in East Liberty?

<table>
<thead>
<tr>
<th>Metric</th>
<th>East Liberty</th>
<th>Compared to Normative Metric</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Block Size</td>
<td>3.2 acres/block</td>
<td>![Lower than norm]</td>
</tr>
<tr>
<td>Residential Density</td>
<td>15.5 units/acre</td>
<td>![Higher than norm]</td>
</tr>
<tr>
<td>Employment Proximity*</td>
<td>64,760 jobs nearby</td>
<td></td>
</tr>
<tr>
<td>Transit Access Index*</td>
<td>71 transit opportunities</td>
<td></td>
</tr>
</tbody>
</table>
III. Housing + Transportation Affordability

The Housing + Transportation Affordability Index quantifies housing and transportation costs by location. True housing affordability must account for the cost of housing and transportation costs associated with place.

www.htaindex.org
### IV. Energy Profiles: Calculating Savings for Retrofit Strategy

<table>
<thead>
<tr>
<th></th>
<th>Calculation</th>
<th>Savings</th>
<th>Calculation</th>
<th>Savings</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Energy Consumption Reductions</strong></td>
<td>505 kWh x 300000</td>
<td>303,000,000</td>
<td>256 therms x 300000</td>
<td>768000000</td>
</tr>
<tr>
<td><strong>GHG Reductions in MT of CO2e</strong></td>
<td>9,300</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Annual Energy Cost Savings to Homeowners</strong></td>
<td>@$0.12 /kwhr</td>
<td>$36,360,000</td>
<td>@$1.00/therm</td>
<td>$76,800,000</td>
</tr>
<tr>
<td><strong>Total Cost Savings</strong></td>
<td></td>
<td>$113,160,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Reductions in GHG MT of CO2e</strong></td>
<td>417,300</td>
<td></td>
<td></td>
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</tr>
<tr>
<td><strong>Total Jobs Created</strong></td>
<td></td>
<td>13,500</td>
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