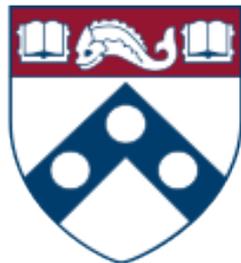


Progress Update on SCIC

Partnership for Sustainable Communities
Washington, DC
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PennIUR

PENN INSTITUTE *for* URBAN RESEARCH

Background

In 2010-2011, PennIUR completed a scan of 22 sustainability indicator systems, comprised of 377 separate indicators.

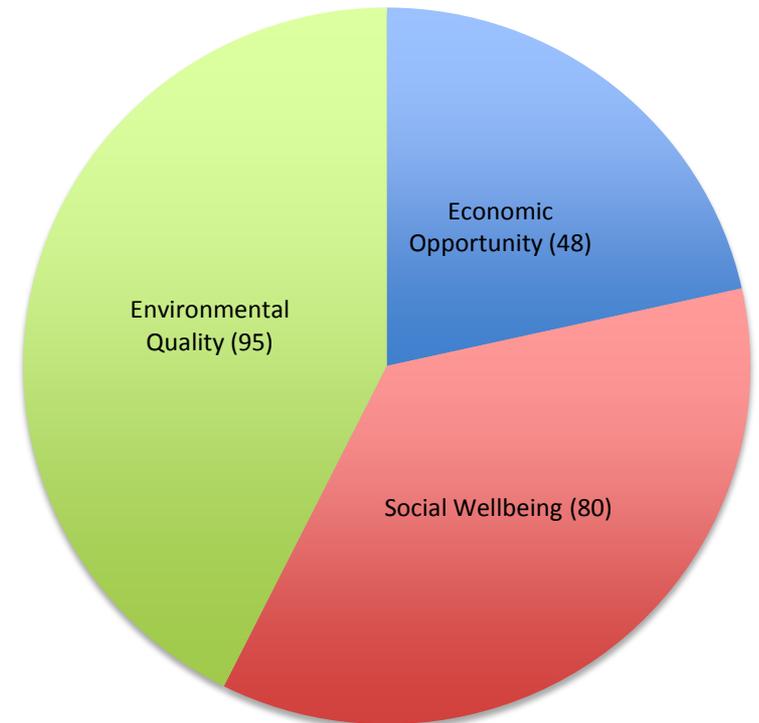
Systems varied widely in emphasis, content, and goal.

Many individual indicators were not easily replicable or meet the SMART (Specific, Measurable, Achievable, Relevant, Time-Related)* test.

Shen, Li-Yin, J. Jorge Ochoa, Mona N. Shah, and Xiaolin Zhang, 2010. The Application of Urban Sustainability Indicators: A Comparison Between Various Practices. *Habitat International*. 1-13.

2011 Conclusions

- Coverage of economic and social well-being indicators was insufficient.
- It is difficult to reduce the measurement of progress towards a sustainable future to a handful of variables.
- There are other indicators that merit consideration and lots of uncoordinated activity on indicators...



Enter the Sustainable Communities Indicator Catalog (SCIC)

PennIUR, in partnership with the Ford Foundation and the Partnership for Sustainable Communities, is developing a **web-based knowledge-sharing platform** where users will be able to learn how to use indicators to measure progress towards a sustainable urban future.

Relationships to Other Indicator Efforts

- Communities, governments, and other organizations across the country have developed methods and metrics to evaluate progress.
- The SCIC addresses performance measurement, with information on a variety of sustainable community indicators that are currently in-use and links to their users.

Goals of the Project

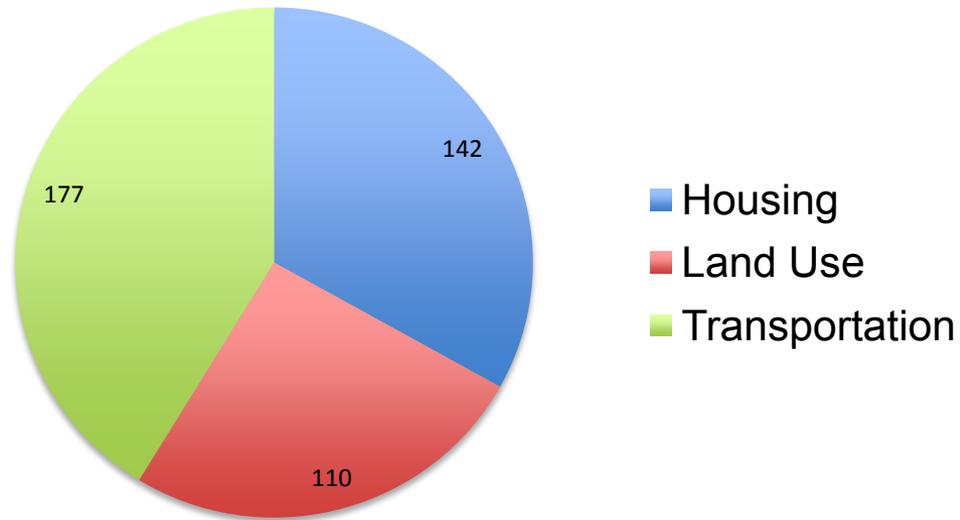
- Compile a searchable catalog of indicators that provide information on sustainable communities.
- Connect disparate efforts on indicators and performance measurement.
- Assist communities and the PSC in evaluating the value of their investments and prioritizing future investment.
- Provide a platform to introduce performance measurement and indicators to new users.
- Share information on how to implement indicators.

Process

- Identified instances from 60+ different community, regional, and municipal indicator initiatives (linked to sustainability or community quality of life/livability)
- From that list, identified nearly 500 instances of indicator use. (This is an ongoing process. We continue to identify instances and queue them for cataloging)
- Grouped instances thematically by “major” area – housing, land use, or transportation. In cases where the instance was cross cutting, a “parent” area was assigned. For example, residential proximity to open space covers housing, transportation, and land use. Land use is the driving lever, so it is the parent tag.
- Through an iterative process, we collated the instances into indicators, tagged the goals, and continue to refine indicators in preparation for write up for SCIC.

Instances

Housing	142	33.1%
Land Use	110	25.6%
Transportation	177	41.3%



Instances

- Instances were relatively evenly distributed.
- Housing instances were often uniform, focused on measures of affordability from nationally available data.
- High levels of consensus on some instances.
 - e.g. Two land use indicators (acres of parks, access to parks) account for a third of all land use instances.
- Many indicator systems use multiple measures of the same style
 - e.g. Mode share of walking/transit/auto etc. (37 instances for 21 organizations) or growth in exurban areas/existing urban centers/growth in older suburbs.

Summary of Top Five Indicators

Housing	Land Use	Transportation
Housing Cost Burden (27)	Area of Parks and Open Space (22)	Commuter Mode Share (37)
Homeownership Rate (14)	Access to Parks and Open Space (14)	Bike and Trail Infrastructure (28)
Vacancy Rate (10)	Access to Transit (11)	Transit Ridership (18)
Foreclosures (9)	Tree Planting (11)	VMT (16)
Building Permits (6) Residential Energy Use (6)	Brownfield Redevelopment (7)	Alternative Fuel Use (9) Hybrid Vehicles (9)
51% Of All Instances	69% Of All Instances	68% Of All Instances

Housing Indicators

Most Common Indicators	High Quality Indicators	Additional Indicators	Indicators Set for Exclusion
<ol style="list-style-type: none"> 1. Housing Cost Burden 2. Homeownership Rate 3. Vacancy Rate 4. Foreclosures 5. Building Permit Issuance 6. Residential Energy Use 	<ol style="list-style-type: none"> 1. Stable Residential Tenure 2. H&T Index 3. Number of People Per Room 	<ol style="list-style-type: none"> 1. LEED Certified Residential Units 2. Code Compliant Housing 3. Housing Development 4. Home Loan Success Rate 5. Residential Electricity Use 6. Residential Natural Gas Use 7. Solar PV Installations 8. Number of Affordable Units Developed 9. Housing Cost Gap 10. Household Formation 11. Abandoned Buildings 12. Residential Water Consumption 13. Solar Thermal Installations 14. Green Roof Coverage 15. Housing Rehabilitations 16. Substandard Housing Rate 17. Homes Sold Downtown 18. Homelessness 19. High Cost Mortgages 20. Housing Stock Age 	<ol style="list-style-type: none"> 1. Number of Homes Below Median Rent 2. Gini Coefficient 3. Median Rent 4. Housing Cost Index 5. Energy Star Rated Homes 6. Median Home Price 7. Participation in Loan/Consultation Programs 8. Dormitory Bed to Student Ratio 9. Residential GHG Emissions 10. Homes Connecting to Public Sewer

Housing Indicators

Access/Equity	Health	Economic Comp.	Affordability	Environment	Sense of Place
5	5	4	10	8	10
17%	17%	14%	34%	28%	34%

- Good coverage of goals, with an emphasis on affordability, sense of place, and environment
- Access dealt with ability to enter housing market
- Health indicators related to quality of housing

Land Use Indicators

Most Common Indicators	High Quality Indicators	Additional Indicators	Indicators Set for Exclusion
<ol style="list-style-type: none"> 1. Access to Parks and Open Space 2. Acres of Parks and Open Space 3. Access to Transit 4. Tree Planting 5. Brownfield Redevelopment 	<ol style="list-style-type: none"> 1. Growth in Existing Urban Centers and Suburbs 2. Population Living in High Density Areas 3. Resource Development Pressure 4. Access to Biking and Pedestrian Networks 5. Access to Healthy Food 6. Number of Vacant Lots 7. Tree Coverage 8. Acres of Land Preserved 9. Density of Housing Near Transit 10. Development in Rural Areas 11. Development in Unincorporated Areas 	<ol style="list-style-type: none"> 1. Farmers Markets 2. Access to Schools 3. Access to Health Services 4. Access to Retail Areas 5. Acres in Agricultural Production 6. Density of New Development in Exurban Areas 7. Permeable Area of Developed Sites 8. Area Undeveloped yet Unprotected 	<ol style="list-style-type: none"> 1. LEED Certified Buildings 2. Green Roof Coverage 3. Community Garden Plots 4. Percentage of Area Developed 5. Hiking Trails

Land Use Indicators

Goal Tag Coverage

Access/Equity	Health	Economic Comp.	Affordability	Environment	Sense of Place
16	7	2	1	12	11

Sub-Tag Coverage

Compact Development	Redevelopment	Growth Management
15	2	10

- All access indicators are tagged as land use, housing AND transportation, but filed under land use 'parent tag' in this presentation.
- Not all land use indicators fit under the three land use sub-tags. Site-scale (e.g. community gardens, green roof coverage) and service/infrastructure-oriented indicators (tree planting, farmers markets) do not fit within this framework.

Transportation Indicators

Most Common Indicators	High Quality Indicators	Additional Indicators	Indicators Set for Exclusion
<ol style="list-style-type: none"> 1. Commuter Mode Share 2. Bike and trail infrastructure 3. Public Transportation Ridership 4. VMT 5. Alternative Fuels (Use/Purchase) 6. Hybrid Vehicles 	<ol style="list-style-type: none"> 1. Public Transportation Service 2. Travel Time to Work 3. Pedestrian infrastructure 4. Walkability 5. Public Transportation Equity (Late Night Bus Service access to low-income people) 6. Alternative transportation (number of cyclists...) 	<ol style="list-style-type: none"> 1. Electric vehicles 2. Car Share 3. Traffic Accidents 4. Fuel Consumption/ Purchase 5. Road infrastructure 6. Transportation Costs as a proportion of household income 7. Vehicle Ownership Rate 8. Traffic Congestion 9. Intercity Bus Revenues 10. Average Transit Vehicle Age 11. Transportation GHG Emissions 12. Park and Ride Lots 13. Transit-oriented Development: Station Ridership 14. City Fleet: Gas Mileage 15. Workers with no vehicle available 16. Passenger Trips at Airport 	<p>Count of Private Vehicles</p>

Transportation Indicators

Access/ Equity	Health	Economic Comp.	Affordability	Environment	Sense of Place
15	7	4	3	21	4
52%	24%	14%	10%	72%	14%

- Good coverage of access (public transportation...) and environment (VMT, hybrid/electric vehicles...), as expected
- Some coverage of health linked to alternative modes (biking and walking)
- Very limited coverage of affordability, sense of place and economic competitiveness

Sub-Tag Coverage

Rail*	Bus	Demand- Response Bus*	Non-motor/Bike- Ped	Auto
7	12	2	6	17

*: No specific indicator, only common (commuter mode share...)

Goal Coverage by Most Common Indicators

	Access/Equity	Health	Economic Comp.	Affordability	Environment	Sense of Place
Housing	None	None	<ul style="list-style-type: none"> •Homeownership Rate •Foreclosure Rate 	<ul style="list-style-type: none"> •Housing Cost Burden •Vacancy Rate •Foreclosure Rate •Building Permit Issuance 	<ul style="list-style-type: none"> •Residential Energy Use 	<ul style="list-style-type: none"> •Vacancy Rate •Foreclosure Rate
Land Use	<ul style="list-style-type: none"> •Access to Parks and Open Space •Access to Transit 	<ul style="list-style-type: none"> •Access to Parks and Open Space 	None	None	<ul style="list-style-type: none"> •Area of Parks and Open Space •Brownfield Redevelop. •Tree Planting 	<ul style="list-style-type: none"> •Brownfield Redevelopment •Tree Planting
Transportation	<ul style="list-style-type: none"> •Commuter Mode Share •Bike and Trail Infrastructure •Transit Ridership 	<ul style="list-style-type: none"> •Commuter Mode Share •Bike and Trail Infrastructure 	None	None	<ul style="list-style-type: none"> •Commuter Mode Share •Bike and Trail Infrastructure •Transit Ridership •VMT •Alternative Fuels •Hybrid Vehicles 	<ul style="list-style-type: none"> •Bike and Trail Infrastructure

Suggested Indicators

	Access/Equity	Health	Economic Comp.	Affordability	Environment	Sense of Place
Housing	<ul style="list-style-type: none"> •H&T Index 	<ul style="list-style-type: none"> •Number of People Per Room •Stable Housing Tenure 	<ul style="list-style-type: none"> •Homeownership Rate •Foreclosure Rate 	<ul style="list-style-type: none"> •Housing Cost Burden •Vacancy Rate •Foreclosure Rate •Building Permit Issuance •H&T Index 	<ul style="list-style-type: none"> •Residential Energy Use 	<ul style="list-style-type: none"> •Vacancy Rate •Foreclosure Rate •Number of People Per Room •Stable Housing Tenure
Land Use	<ul style="list-style-type: none"> •Access to Parks and Open Space •Access to Transit •Growth in Existing Urban Centers and Suburbs 	<ul style="list-style-type: none"> •Access to Parks and Open Space •Access to Walking and Biking Networks 	<ul style="list-style-type: none"> •Growth in Existing Urban Centers and Suburbs 	<ul style="list-style-type: none"> •Access to Walking and Biking Networks 	<ul style="list-style-type: none"> •Area of Parks and Open Space •Brownfield Redevelopment •Tree Planting 	<ul style="list-style-type: none"> •Brownfield Redevelopment •Tree Planting
Transportation	<ul style="list-style-type: none"> •Commuter Mode Share •Bike and Trail Infrastructure •Transit Ridership •Public Transportation Service •Pedestrian infrastructure •Public Transportation Equity •Alternative Transportation 	<ul style="list-style-type: none"> •Commuter Mode Share •Bike and Trail Infrastructure •Pedestrian infrastructure •Walkability •Alternative Transportation 	<ul style="list-style-type: none"> •Travel Time to Work 	<ul style="list-style-type: none"> •Public Transportation Equity 	<ul style="list-style-type: none"> •Commuter Mode Share •Bike and Trail Infrastructure •Transit Ridership •VMT •Alternative Fuels •Hybrid Vehicles •Pedestrian infrastructure •Walkability •Alternative Transportation 	<ul style="list-style-type: none"> Bike and Trail Infrastructure •Pedestrian infrastructure

Proposed Highlighted Indicators

Housing	Land Use	Transportation
<ol style="list-style-type: none">1. Housing Cost Burden2. Homeownership Rate3. Vacancy Rate4. Building Permit Issuance5. Residential Energy Use6. Stable Residential Tenure7. H&T Index8. Number of People Per Room	<ol style="list-style-type: none">1. Access to Parks and Open Space2. Access to Transit3. Growth in Existing Urban Centers and Suburbs4. Access to Walking and Biking Networks5. Brownfield Redevelopment	<ol style="list-style-type: none">1. Commuter Mode Share2. Bike and trail infrastructure3. Public Transportation Ridership4. VMT5. Hybrid Vehicles6. Public Transportation Service7. Travel Time to Work8. Pedestrian infrastructure9. Public Transportation Equity (Late Night Bus Service access to low-income people)10. Alternative transportation (number of cyclists...)

Summary

- Many communities are working to measure investment in livability and sustainability.
- A blend of common indicators and new or less used indicators provides a foundational set of indicators.
- Other inventive indicators supplement these.

Special Thanks

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Federal Reserve System