

# Multi-Sector Metrics For Population Health

---

**Rajiv Bhatia**

# Why Metrics?

# Indicators Communicate Needs, Problems & Problem Frames

Indicators Provide a Means to  
Measure Progress Towards The  
World That We Want

Indicators Drive Instructions &  
Rules for Policies, Laws &  
Institutions

# Indicators Help Hold Responsible Parties Accountable

**In the late 1990s,  
San Francisco  
began repurposing  
historically  
industrial land for  
residential and  
office uses.**



**To align planning with community needs, the City brought together non-profits, businesses, and public agencies to examine growth plans from a health and equity lens.**



**Civic organizations wanted a yardstick  
to measure progress towards and hold  
the City accountable to a vision of  
healthy development.**

**SUSTAINABLE COMMUNITIES INDEX**  
Healthy Cities, Healthy People

Home   Measures   City Indicators   Resources   About  

**About the SCI**

The Sustainable Communities Index is a system of indicators for livable, equitable and prosperous cities. This site provides the methods and data sources required for collecting indicators in your city or region and resources for applying these metrics to planning, policy making and civic engagement.

[» MORE](#)

**News**

November 19<sup>th</sup>, 2012  
[Open Data](#)

Data for most SCI measures for San Francisco are now available through the City's data portal, [DataSF](#), as part of its open data initiative.

Data sets now available for download [here!](#)

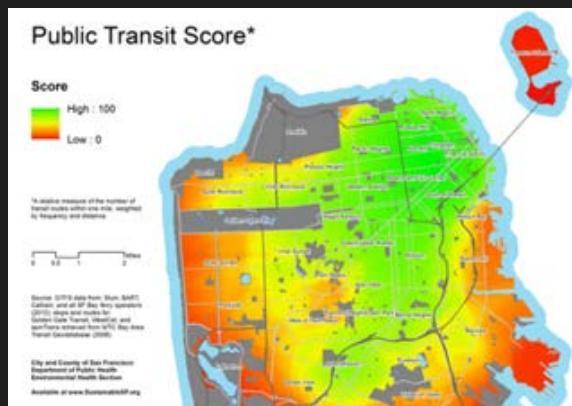
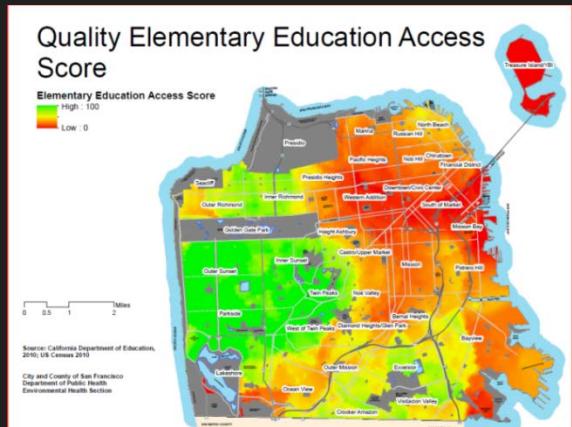
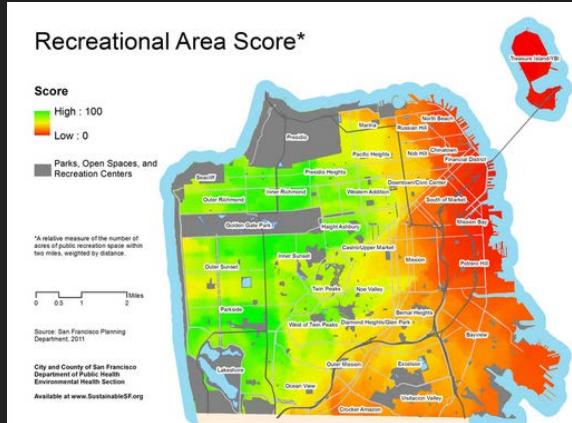
[» MORE](#)



**The City developed the Sustainable Communities Index as a system of performance indicators to measure land use and growth plans.**

**Indicators showed that neighborhoods with planned growth excelled in some health resources but had significant gaps with others.**

**One response was a development fund for new community-supporting infrastructure.**



# Applications of Indicators in City Planning

- Numerical targets for planning policy
- Thresholds for land use Regulations
- Justifications of Impact Fees
- Targeting of Infrastructure Funding
- Advocacy

# **Indicators were effective in catalyzing population health action in multiple sectors when they:**

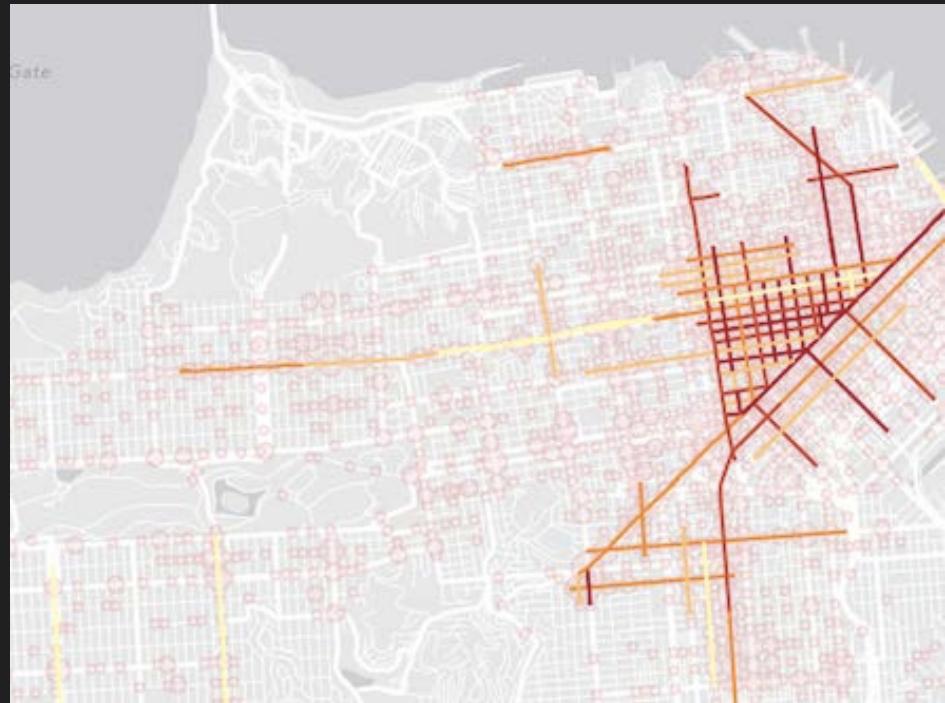
- Reflected collective needs & priorities
- Measured at a human scale
- Documented unequal and harmful conditions

## **Identified responsible parties**

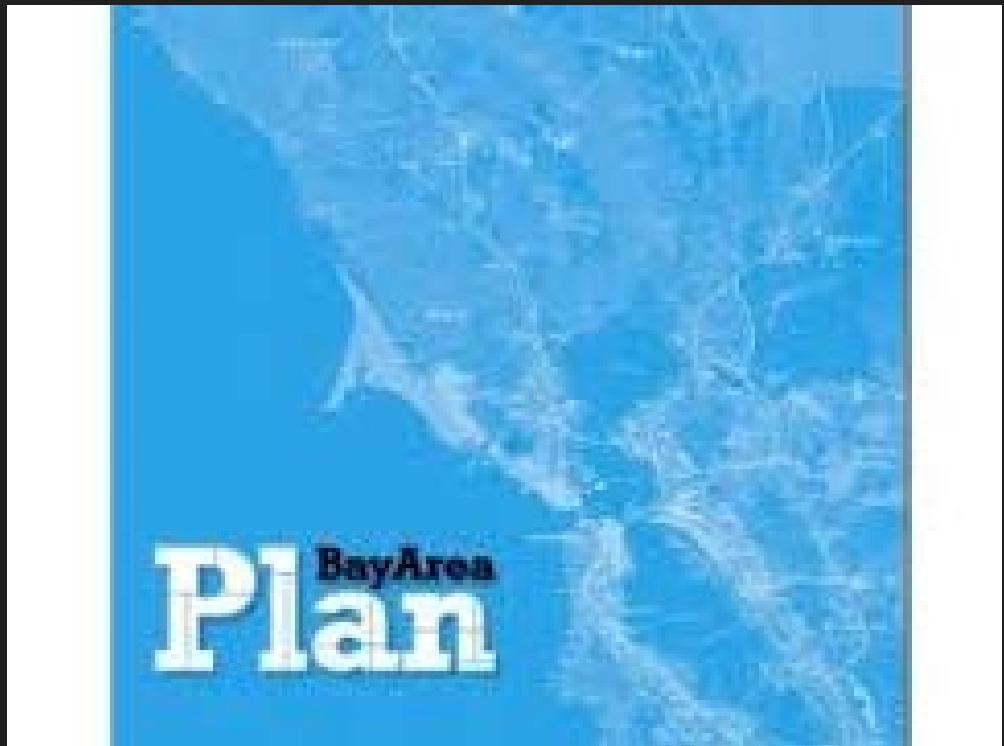
- Came with responsive actions
- Could be integrated into institutional rules

**The City crafted a new indicator to measure pedestrian injury density documenting the spatial concentration of serious pedestrian injuries on busy streets in mixed-use neighborhoods.**

**This indicator became a city performance measure and justified re-deployment of enforcement and engineering resources.**



**The Bay Area  
Metropolitan  
Transportation  
Commission used  
health indicators to  
prioritize  
transportation  
funding based on  
community goals  
and priorities.**



## REGIONAL INDICATORS

DECEMBER 2011

Scenarios were assessed to determine how future development might relate to current conditions. This table shows how each scenario performs with regard to a set of current sustainability indicators related to equity, the economy, and the environment.

| INDICATORS ▼                            |  |   |   |   |  |  |  |  |   |  |  |  |   |
|---|--|---|---|---|--|--|--|--|---|--|--|--|---|
|   | JOB DENSITY  | POVERTY   | HOUSING TENURE  | HOUSING DENSITY   | AFFORDABILITY  | RACE   | SCHOOL QUALITY   | RESOURCE AREAS   | VMT PER CAPITA  | TRANSIT  | WALKABILITY  | CRIME  | PEDESTRIAN/ BICYCLE SAFETY  |
|   | Percent of New Housing Growth in areas with existing job densities above 5 jobs per acre (Mean Job Density = 5.) | Percent of New Household Growth in areas with high Poverty Concentration (greater than 30% double national poverty rate.) | Percent of New Household Growth in Census Tracts that are Majority Rental | Percent of New Household Growth in areas with existing housing densities above 6 units/ acre (Mean Housing Density = 6) | Percent of New Household Growth in areas where more than 8% of housing stock is Deed-Restricted Affordable Housing | Percent of New Household Growth in areas that are Majority People of Color (greater than 70%). | Percent of New Household Growth in areas with a mean School API less than 800 (CA State standard.) | Percent of New Household Growth in areas with Prime Farmland or Critical Habitat | Percent of New Household Growth in areas with lowest current VMT per Capita (10 miles or less per day.) | Percent of New Household Growth in areas with highest access to Frequent Transit (20 minutes or less per day.) | Percent of New Household Growth areas that are currently considered Walkable (6+ Businesses within one mile) | Percent of New Household Growth in areas with Highest Violent Crime rates (800+ annual per 100,000 pop.) | Percent of New Household Growth in areas with historically high fatal or severe injury collisions (per 100 people). |
| SCENARIOS ▼                             | 25% → 75%  | 0% → 50%  | 25% → 60%   | 25% → 50%   | 0% → 30%   | 0% → 40%   | 40% → 60%  | 0% → 10%   | 0% → 20%  | 10% → 25%  | 15% → 25%  | 10% → 15%  | 0% → 5%   |
| <b>1</b> Existing Conditions            | 36%  | 25%   | 36%   | 40%   | 22%  | 24%  | 42%  | 7%   | 11%   | 13%  | 17%  | 11%  | 2%  |
| <b>2</b> Core Concentration             | 62%  | 38%   | 50%   | 47%   | 25%  | 37%  | 55%  | 5%   | 17%   | 23%  | 22%  | 12%  | 2%  |
| <b>3</b> Focused Growth                 | 61%  | 37%   | 47%   | 41%   | 24%  | 32%  | 55%  | 5%   | 18%   | 21%  | 22%  | 12%  | 1%  |
| <b>4</b> Constrained Core Concentration | 67%  | 39%   | 51%   | 45%   | 27%  | 34%  | 56%  | 5%   | 20%   | 24%  | 24%  | 12%  | 1%  |
| <b>5</b> Outward Growth                 | 56%  | 34%   | 43%   | 37%   | 21%  | 29%  | 54%  | 7%   | 15%   | 19%  | 21%  | 11%  | 2%  |

Scenarios were assessed for equity based on five measures chosen to reflect key regional equity issues. This table shows how each scenario performs for both the region's communities of concern and the rest of the region.

| MEASURES ▼                       |  |  |                        |                     |                        |                     |                           |                     |                        |                     |
|----------------------------------|--|--|------------------------|---------------------|------------------------|---------------------|---------------------------|---------------------|------------------------|---------------------|
|                                  | 1 HOUSING AND TRANSPORTATION AFFORDABILITY |  | 2 DISPLACEMENT RISK    |                     | 3 VMT DENSITY          |                     | 4 NON-COMMUTE TRAVEL TIME |                     | 5 COMMUTE TIME         |                     |
|                                  | Households less than \$38K/year (2010\$)   | Households more than \$38K/year (2010\$) | Communities of Concern | Remainder of Region | Communities of Concern | Remainder of Region | Communities of Concern    | Remainder of Region | Communities of Concern | Remainder of Region |
| BASE YEAR ►                      | 77%  | 41%                                      | n/a                    | n/a                 | n/a                    | n/a                 | 12.2                      | 12.5                | 25.4                   | 27.1                |
| SCENARIOS ▼                      | 10% ----100%                               | 10% ----100%                             | 0%-----50%             | 0%-----50%          | 0 ----- 3,200          | 0 ----- 3,200       | 0 ----- 15                | 0 ----- 15          | 0 ----- 30             | 0 ----- 30          |
| 1 Initial Vision                 | 77%**                                      | 43%                                      | 38%                    | 10%                 | 2,900                  | 1,000               | 12.8                      | 13.1                | 28.5                   | 28.7                |
| 2 Core Concentration             | 84%  | 44%                                      | 40%                    | 10%                 | 3,100                  | 1,000               | 12.9                      | 13.1                | 27.6                   | 28.7                |
| 3 Focused Growth                 | 85%  | 44%                                      | 35%                    | 7%                  | 2,900                  | 1,000               | 12.7                      | 12.9                | 27.3                   | 27.7                |
| 4 Constrained Core Concentration | 85%  | 44%                                      | 35%                    | 7%                  | 3,000                  | 1,000               | 12.7                      | 12.9                | 27.4                   | 27.8                |
| 5 Outward Growth                 | 85%  | 44%                                      | 30%                    | 7%                  | 2,800                  | 1,100               | 12.5                      | 12.8                | 27.3                   | 27.8                |

\* The location of "major roadways" is based on 2035 network volumes, so a base year comparison is not provided.

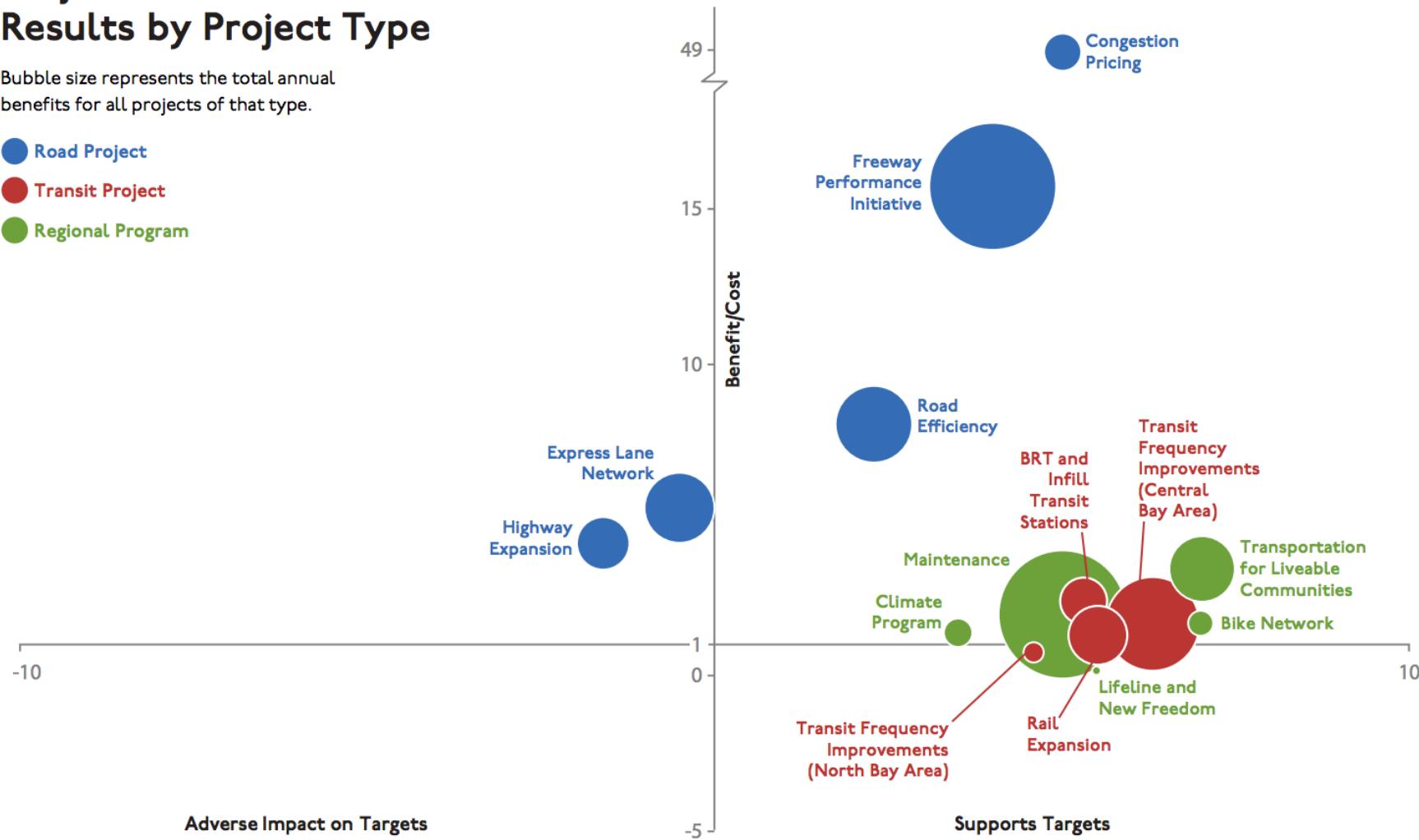
\*\* ABAG revised the regional income forecast after completing the Initial Vision Scenario. Scenarios 2-5 have a greater number and share of low-income households.

FIGURE A-2

## Project Performance Assessment: Results by Project Type

Bubble size represents the total annual benefits for all projects of that type.

- Road Project
- Transit Project
- Regional Program



# **Healthy Communities Index**

**Sponsored by the US Department of Housing and Urban Development to support investments in the physical, social, and economic determinants of health**

**Responds to the need for a comprehensive and uniform practice for monitoring neighborhood level determinants of community health**

# HCI: Indicator Selection Criteria

Established nexus to population health

Measurable at the neighborhood scale

Available actions to improve indicator

Relevant to priority community needs

# Indicator Selection Process

**Considered**

- More than 220 indicators

**Reviewed**

- More than 90 indicators

**HUD Selected**

- 37 core indicators
- 5 contextual indicators

# HCI Domains



**Environmental  
Hazards**



**Educational  
Opportunities**



**Natural Areas**



**Employment  
Opportunities**



**Transportation  
Services**



**Neighborhood  
Characteristics**



**Housing**



**Economic Health**



**Social Cohesion**

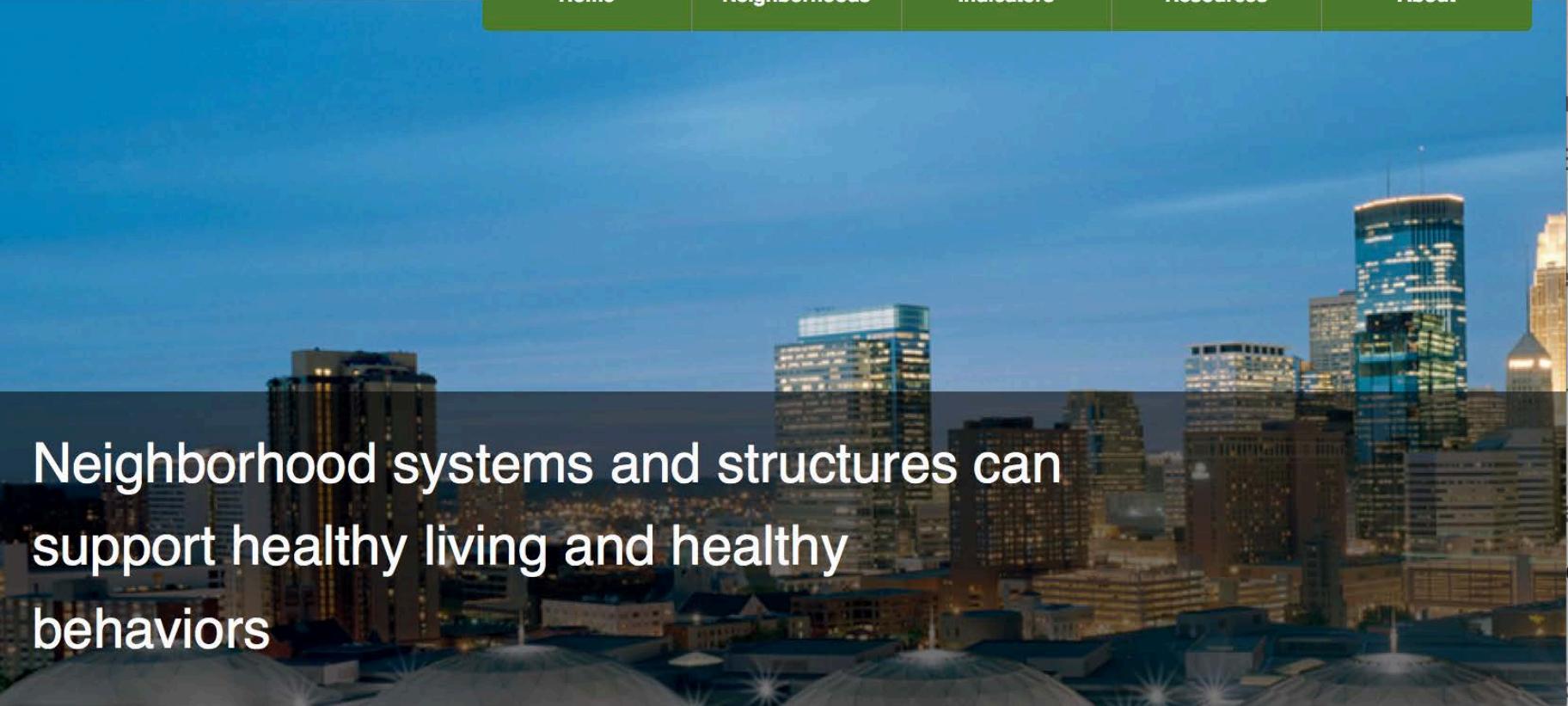


**Health Systems &  
Public Safety**



healthy communities  
assessment tool

# Minneapolis, Minnesota

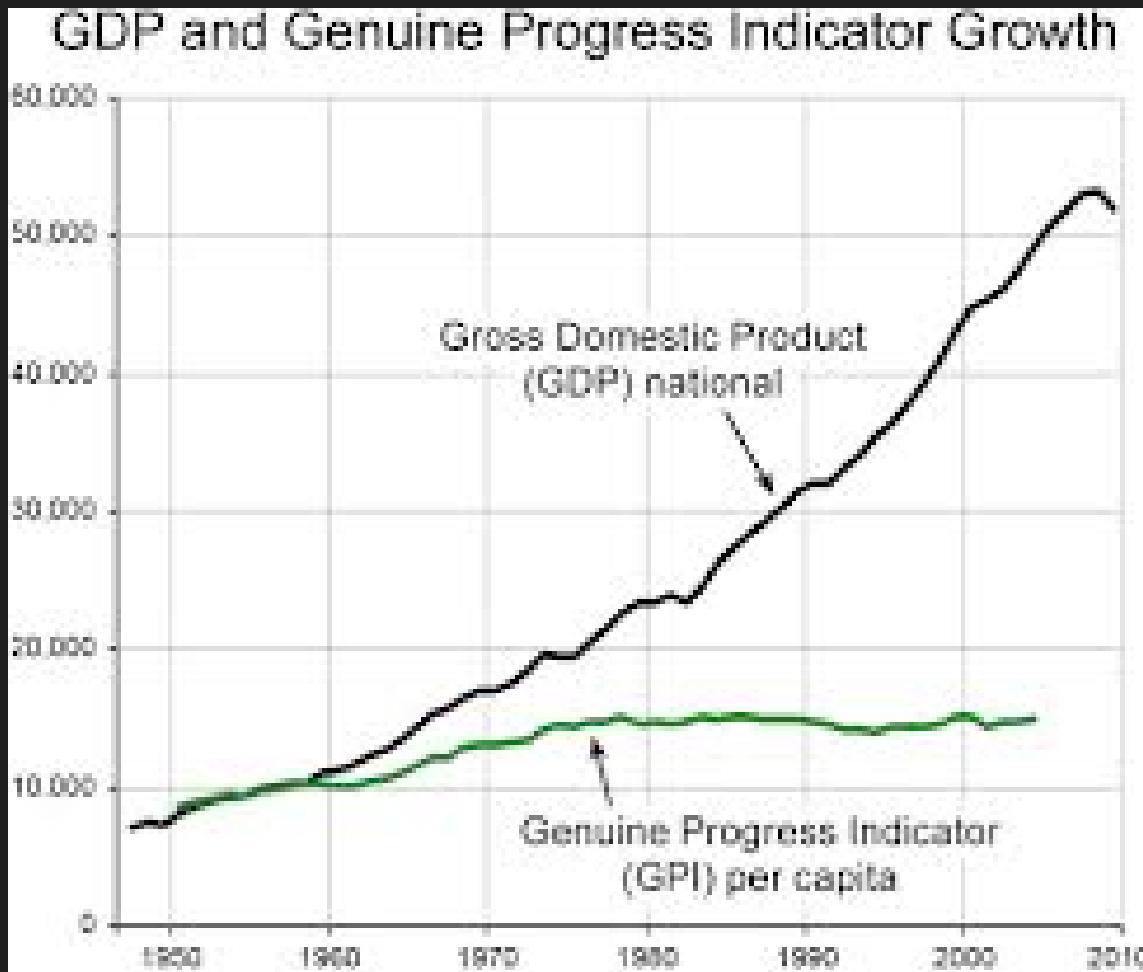
[Home](#)[Neighborhoods](#)[Indicators](#)[Resources](#)[About](#)

**Neighborhood systems and structures can  
support healthy living and healthy  
behaviors**

# HCI Pilots – Lessons Learned So Far

- Able to implement uniform indicators across multiple cities
- Landscape of competing indicator projects
- Emerging stakeholder ownership
  - Engagement has occurred late in process
- Indicators searching for applications

# Indicators $\neq$ Progress



# Models for Population Health Indicators



# Population Health Indicators: Data First vs. Purpose First

# Thank-you!

Rajiv Bhatia  
@drrajivb  
thecivicengine.org