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City of Bloomington Sustainability Action Plan Mini-Course on Sustainability Planning

Dr. Kenneth Richards, PhD, JD
Consultant, GTSI
Professor, SPEA

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SPEA Lead for the Greater Good

Political And Civic Engagement PACE — Bringing theory... ...to practice

1818 200 YEARS 2018 #Bloomington200

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Who are you?

- Working group members
- Advisory board members
- SAP Team members
  - Alex Crowley, Bloomington City, Department of Economic and Sustainable Development
  - Jane St. John, LLC
  - PACE
  - SPEA Students
  - GTSI (Principal and Consultants)

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Challenges in Strategic Planning for Cities

- Multiple roles of city (operational goals vs. community goals)
- Diversity of stakeholders
- “Garbage can” theory of organization

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Purpose of Today's Sustainability Planning Mini-Course

- Develop a common approach
- Create a common language
- Kickstart for initiative

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Principles for a Sustainability Action Plan

- **Long-term thinking** –future oriented to improve resiliency in face of change
- **Broad in scope** – considers economic, environmental, social and/or cultural sustainability
- **Integration** – coordinated approach that draws linkages between different types of plans or planning activities (e.g. Comprehensive Plan, Transportation Plan, Environmental Action Plan, Habitat Connectivity Plan)
- **Collaboration** - engages community members and other partners to support community sustainability
- **Public engagement and education** - enhances public input into planning processes
- **Implementation** - keeps plan "off the shelf" and puts it into action
- **Monitoring and evaluation** – sets targets and tracks results to celebrate progress

Adapted from: Integrated Community Sustainability Plan toolkit (https://www.toolkit.bc.ca/icsp)

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Sustainability Action Plan

Sustainability

Planning

Action

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Sustainability

What does “sustainability” mean to you?

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Sustainability

Definitions of Sustainability

- "Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs." (Bruntland Commission 1987)
- "The need to ensure a better quality of life for all, now and into the future, in a just and equitable manner, whilst living within the limits of supporting ecosystems." (Agyeman et al. 2003, 5)
- "A generation is defined as behaving sustainably if it does not expect to be envied by future generations." (Woodward 1999)
- "Sustainable cities work towards an environmentally, socially, and economically healthy and resilient habitat for existing populations, without compromising the ability of future generations to experience the same." (ICLEI Local Governments for Sustainability)

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Sustainability

Key concepts of sustainable development	Principles of sustainable development
Meeting needs of present generation	**Social equity** • Intra-generational equity • Inter-generational equity • Stability of social and cultural systems **Economic growth** • maximum income while maintaining assets that yeild these benefits
Ability of future generations to meet their needs	**Environmental protection** • No systematic increases in concentrations of substances from the earth's crust • No systematic increases in concentrations of substances produced by society • No systematic physical degradation of nature

Sustainability

Definitions of Sustainability

- **Global/National Sustainability:** The capacity to use resources – natural, environmental, human, and social – in an efficient and equitable manner within and across generations.

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Sustainability

Definitions of Sustainability

- **Global/National Sustainability:** The capacity to use resources – natural, environmental, human, and social – in an efficient and equitable manner within and across generations.

- **Corporate Sustainability:** The design and delivery of services to society that simultaneously contribute to global sustainability and longevity for the corporation.

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Sustainability

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- **Global/National Sustainability:** The capacity to use resources – natural, environmental, human, and social – in an efficient and equitable manner within and across generations.
- **Corporate Sustainability:** The design and delivery of services to society that simultaneously contribute to global sustainability and longevity for the corporation.
- **Municipal Sustainability:** The provision of physical services and governance to residents in a manner that (1) contributes to global sustainability, (2) enhances the well-being of all residents and (3) encourages its community to make decisions that also contribute to global sustainability.

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Sustainability

Why is defining sustainability important?

- Potential for plan to die under its own weight
- Lack of focus = lack of action

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Sustainability

Topics covered by other City sustainability plans

	Energy	Env't and Nat Resources	Transp	Land Use	Water	Air	Buildings	Waste	Food and Ag	Climate	Brown-fields	Green Economy	Health and Wellness	Eng't
Louisville, KY	X	X	X									X		X
Ann Arbor, MI	X	X		X						X				
Columbia, MO	X		X	X				X		X		X		
New York, NY		X			X	X		X		X	X			
Boulder County, CO	X	X	X	X	X	X	X	X	X	X			X	

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Focus topics for this first Sustainability Action Plan

- **Environmental Quality and Natural Systems,** including air quality, groundwater quality, drinking water quality, storm water management, water conservation, protection of biodiversity and habitats, preservation of greenspace, brownfields redevelopment, Super Fund site remediation
- **Transportation –** transportation choices, sustainable infrastructure, bike share, low emissions vehicles
- **Climate, Energy, and the Built Environment –** greenhouse gas emissions reductions, energy efficiency improvements, green building standards, renewable energy, fuel switching, brownfields redevelopment
- **Local Food and Agriculture –** food insecurity, local food options, gardens, sustainable food choices

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Example City Sustainability Plans

- Ann Arbor, Michigan
- Louisville, Kentucky
- Salt Lake City, UT
- Lakewood, Colorado
- Chicago, IL
- St. Louis, MO
- Boulder County, CO
- Grand Rapids, MI

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Boulder County, CO Sustainability Plan

CLIMATE GOAL

Achieve carbon neutrality and become more resilient to the potential effects of climate change

INTERNAL

TARGET 1

Achieve carbon neutrality for Boulder County operations

SHORT-TERM STRATEGIES

Green Building Related Strategies

STRATEGY 1
Require that all existing Boulder County buildings be eligible for the ENERGY STAR label by 2014 and to achieve a minimum score of 85 (see "Energy & Buildings" for more detail)

STRATEGY 2
All new Boulder County buildings strive for a 48% improvement in building performance from baseline as described in ANSI (American National Standards Institute), ASHRAE (American Society of Heating, Refrigerating and Air Conditioning Engineers), and IESNA (Illuminating Engineering Society of North America) Standard 90 1-2007 (see "Energy &

STRATEGY 5
Expand purchase of renewable energy from local utilities to achieve carbon neutrality by 2020

STRATEGY 6
Create an internal carbon neutrality task force dedicated to making internal county operations carbon neutral by 2020

STRATEGY 7
Implement controls and policies to limit idling of municipal and county vehicles

STRATEGY 8
Establish projects and programs to reduce the absolute number of employee commute trips (see "Transportation" section for more details)

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Boulder County, CO Sustainability Plan

EXTERNAL

TARGET 2

Reduce countywide greenhouse gas emissions by 40% below 2005 levels by 2020

SHORT-TERM STRATEGIES

STRATEGY 1
Continue to offer EnergySmart, Boulder County's energy efficiency service, to residents and businesses

STRATEGY 2
Offer low-interest financing through Elevations Credit Union's Energy Loans program for residents and businesses to complete energy efficiency upgrades and install renewable energy

STRATEGY 3
Support increased access to renewable energy sources throughout Boulder County

STRATEGY 7
Support the increase of utility demand-side management programs and renewable power supply incentives, including an aggressive renewable portfolio standard

STRATEGY 8
Encourage the adoption of residential and commercial energy efficiency codes throughout Boulder County's municipalities and towns

STRATEGY 9:
Continue to strengthen the BuildSmart residential program to move toward

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Chicago, IL Sustainability Plan Transportation Goals

GOALS

6. INCREASE AVERAGE DAILY TRANSIT RIDERSHIP
7. ACCELERATE TRANSIT-ORIENTED DEVELOPMENT AROUND TRANSIT STATIONS
8. MAKE CHICAGO THE MOST BIKE AND PEDESTRIAN FRIENDLY CITY IN THE COUNTRY
9. IMPROVE FREIGHT MOVEMENT AND ACCELERATE HIGH-SPEED PASSENGER RAIL PROJECTS
10. ADVANCE SUSTAINABILITY LEADERSHIP AT CHICAGO'S AIRPORTS
11. STRENGTHEN THE INFRASTRUCTURE TO ADVANCE VEHICLE EFFICIENCY
12. REDUCE MUNICIPAL FOSSIL FUEL CONSUMPTION BY 10%

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Ann Arbor, MI Sustainability Plan

Goal Overview

	Goals	Primary Unit	Supporting Unit(s)	Target Source(s)
Climate & Energy	Sustainable Energy	Systems Planning	Ann Arbor Housing Commission	Energy Challenge Resolution (R-11-142), Climate Action Plan, Housing Commission, City Council Resolution (R-13-283), new
	Energy Conservation	Systems Planning	Information Technology	Climate Action Plan, Budget Goals, new
	Sustainable Buildings	Systems Planning	Planning and Development	Solar Roofs Resolution (R-342-7-06), Downtown Zoning Incentives, Climate Action Plan, Washtenaw County Sustainable Communities Challenge Grant, new
Community	Engaged Community	City Administrator's Office – City Clerk, Communications	Systems Planning, Planning and Development, Information Technology, Parks, Project Management	Budget Goals, new
	Diverse Housing	Housing Commission	Community and Economic Development, Downtown Development Authority	Housing Commission, Budget Goals, DDA
	Human Services	Housing Commission, Community and Economic Development		Housing Commission, Budget Goals
	Safe Community	Police	Systems Planning, Planning and Development, Emergency Management, Housing Commission	Budget Goals, Flood Mitigation Plan, Housing Commission, new
	Active Living & Learning	Parks and Recreation	Downtown Development Authority	Parks and Recreation Open Space Plan, Budget Goals, DDA
	Economic Vitality	Community and Economic Development	Planning and Development, Downtown Development Authority, Systems Planning	Redevelopment Ready Community Best Practices Report, DDA, new
Land Use & Access	Transportation Options	Systems Planning	Project Management	Non-Motorized Transportation Plan, Non-Motorized Transportation Planning and Policy Updates, Climate Action Plan, Connector Feasibility Study, Budget Goals, DDA, new
	Sustainable Systems	Systems Planning		Draft Urban and Community Forest Management Plan, Budget Goals, new
	Integrated Land Use	Planning and Development		City Master Plan, DDA, new
Resource Management	Clean Air & Water	Systems Planning	Water Treatment, Field Operations	Budget Goals, Capital Improvement Plan, Transportation Plan, Climate Action Plan, DDA, new
	Healthy Ecosystems	Systems Planning	Field Operations	Draft Urban and Community Forest Management Plan, Budget Goals, Stormwater Management Program, Huron River Impoundment Management Plan, new
	Responsible Resource Use	Systems Planning	Field Operations	Solid Waste Resource Plan, Budget Goals
	Local Food	Parks and Recreation	Farmers Market, Greenbelt	Farmers Market, Greenbelt District Strategic Plan, Budget Goals

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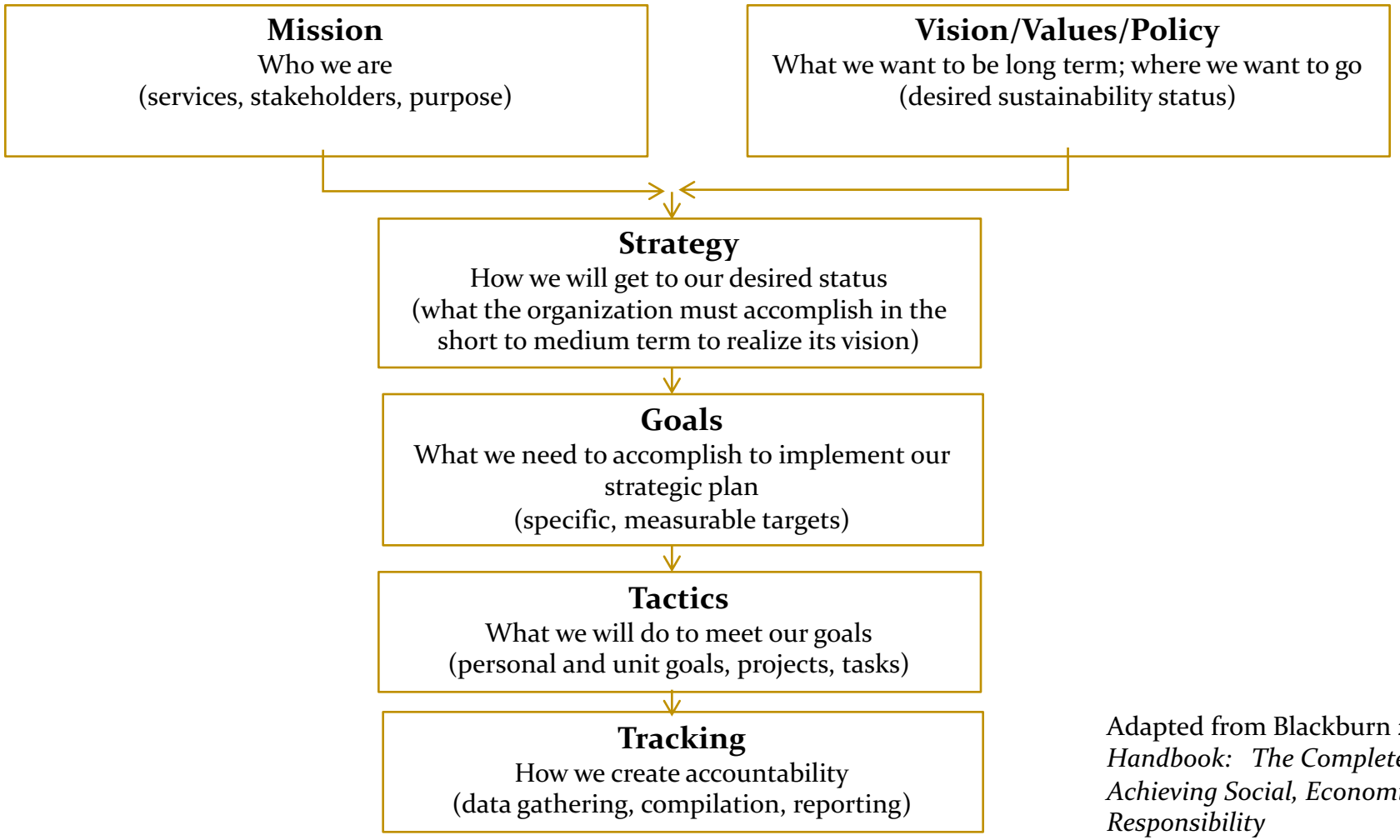

Adapted from Blackburn 2007, *The Sustainability Handbook: The Complete Management Guide to Achieving Social, Economic and Environmental Responsibility*

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Where we are headed: "Sustainability"

Mission
Who we are
(services, stakeholders, purpose)

Vision/Values/Policy
What we want to be long term; where we want to go
(desired sustainability status)

How we will get there: "Plan"

Strategy
How we will get to our desired status
(what the organization must accomplish in the short to medium term to realize its vision)

Goals
What we need to accomplish to implement our strategic plan
(specific, measurable targets)

How we make progress: "Action"

Tactics
What we will do to meet our goals
(personal and unit goals, projects, tasks)

Tracking
How we create accountability
(data gathering, compilation, reporting)

Adapted from Blackburn 2007, *The Sustainability Handbook: The Complete Management Guide to Achieving Social, Economic and Environmental Responsibility*

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Choose indicators wisely

Adapted from Blackburn 2007, *The Sustainability Handbook: The Complete Management Guide to Achieving Social, Economic and Environmental Responsibility*

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An Overview of Bloomington Sustainability Action Plan

- **Mission** - a statement of why the City Government exists
- **Vision** – an internal overarching, aspirational statement regarding what community will look like 5, 10 years from now. The statement is intended to serve as a source of inspiration to influence daily organizational decisions.
- **Strategy** – overall approach for achieving vision
- **Goals** – measurable outcomes for achievement
- **Tactics** – specific actions to be taken to achieve a goal
- **Tracking** – monitoring for accountability

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City of Bloomington Mission Statement

Where We Are Now

Our Mission Statement captures why we exist. Having one written mission statement helps us stay focused on our core purpose and ensure a common, shared approach to the delivery of City services. Our Values guide the ways in which we pursue this Mission.

mission statement

"To preserve, promote and enhance Bloomington, Indiana's distinct identity and vibrant quality of life."

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Criteria for an Effective Sustainability Vision Statement

- ✓ **Forward looking**
- ✓ **Ambitious**
- ✓ **Motivational**
- ✓ **Inspirational**
- ✓ **Realistic**

Adapted from: MyStrategicPlan.com

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Example Sustainability Vision Statements

- **Blackfalds, Alberta** – "Blackfalds is an active family community full of pride, commitment and opportunities reflecting an economically sustainable, self-sufficient, and safe living environment, with a balanced range of municipal services provided through innovation and proactive community partnerships."
- **Washington, DC** – "In just one generation—20 years—the District of Columbia will be the healthiest, greenest, and most livable city in the United States. An international destination for people and investment, the District will be a model of innovative policies and practices that improve quality of life and economic opportunity. We will demonstrate how enhancing our natural and built environments, investing in a diverse clean economy, and reducing disparities among residents can create an educated, equitable and prosperous society."
- **Denver, Colorado** – "Denver is a healthy and prosperous community that thrives on civic engagement and collaboration to enhance the quality of our natural, social, and built environments for current and future generations and serves as a model for others to do the same."

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Example Sustainability Vision Statements

- **Philadelphia, PA–** "Greenworks envisions a sustainable city where all Philadelphians: have access to healthy, affordable, and sustainable food and drinking water; breathe healthy air inside and outside; efficiently use clean energy that they can afford; are prepared for climate change and reduce carbon pollution; benefit from parks, trees, stormwater management, and healthy waterways; have access to safe, affordable, and low-carbon transportation; waste less, and keep our neighborhoods clean; and benefit from sustainability education, employment, and business opportunities."
- **New York, NY** – "New York City will be the most sustainable big city in the world and a global leader in the fight against climate change."
- **Victoria, Canada** – "Victoria, as a community and municipal corporation, is an urban sustainability leader inspiring innovation, pride and progress towards greater ecological integrity, livability, economic vitality, and community resiliency confronting the changes facing society and the planet today, and for generations to come."

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Strategies, Goals, Indicators

- **Strategy** is overall approach – what issues are you going to address, how will you address them
  - E.g., to support our commitment to reducing our impact on climate, we will reduce our in-house emissions of carbon dioxide; specifically we will lower our vehicle fleet emissions and our building-related energy use
- **Goals (or Targets)** should be SMART (Specific – Measurable –Assignable – Realistic– Time-related)
  - E.g., The Transit Department will reduce the city's bus fleet emissions by 20% by 2021 compared to 2018
  - E.g., The ____ Department will reduce the city's building energy usage by 30% by 2021 compared to 2018
- **Metrics/indicators** – "A specific expression that provides information about an organization's sustainability performance, efforts to influence that performance or sustainability conditions."
  - E.g., the calculated emissions from vehicle fleet or the miles per gallon efficiency performance of the average vehicle in the fleet
  - E.g., the amount of energy used in the cooling system

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Example City Sustainability Strategies

- *"Inform, educate and empower residents and property owners to address indoor air quality issues associated with mold, moisture, and asbestos."* (Boulder County, CO)
- "Nurture relationships among local growers, distributors and potential buyers" (Boulder County, CO)
- *"Establish projects and programs to reduce the absolute number of employee commute trips."* (Boulder County, CO)
- *"Encourage the adoption of residential and commercial energy efficiency codes throughout Boulder County's municipalities and towns."* (Boulder County, CO)

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Criteria for Effective Goal Establishment

- ✓ **S**pecific
- ✓ **M**easurable
- ✓ **A**ssignable
- ✓ **R**ealistic
- ✓ **T**ime-related

Alternative's for SMART

- Actionable, Responsible Party Identified
- Agreed, Reasonable
- Ambitious, Results-based

Doran, G. 1981. "There's a S.M.A.R.T. way to write management's goals and objectives." *Management Review*. AMA FORUM. **70** (11): 35–36.

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Benefits and Purposes of Measurable Goals

- Focuses organization on a common mission, enhances teamwork
- Helps define accountability for action
- Documents accomplishments; marks point of success
- Serves as basis for granting rewards
- Motivates people to perform
- Provides early warning device for alerting organization if performance is slipping
- Helps organizations manage and improve processes
- Reveals the strengths and opportunities for improvement in tactics, programs, processes, people, and organizations
- Makes personal performance evaluations more objective
- Guides organization in allocating resources
- Demonstrates responsiveness to stakeholders

From Blackburn 2007, *The Sustainability Handbook: The Complete Management Guide to Achieving Social, Economic and Environmental Responsibility*

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Examples of City Sustainability Goals

- Decrease per capita energy use citywide 25 percent by 2025 (Louisville, KY)
- Decrease energy use in city-owned buildings by 30 percent by 2018 (Louisville, KY)
- Divert 90 percent of solid waste from landfill by 2042 (Louisville, KY)
- Generate 45 percent of energy for city from renewable sources by 2025 (Lakewood, CO)
- Reduce citywide water usage by 20 percent by 2025 (Lakewood, CO)
- Achieve participation of 20 local businesses in green business certification program during its first 3 years of operation (Lakewood, CO)
- Achieve an 80 percent solid waste diversion rate at Civic Center by 2025 (Lakewood, CO)

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Types of Goals

- Basic types of goals: Metric vs. Initiative
  - Metric: Department of Public Works will provide 25 electric vehicle charging stations by 2023
  - Initiative: The Office of the Mayor will launch an online sustainability "ideas board" by 2020
- Timing: Fixed year vs. Multiyear, Short-term vs. Long-term
  - Fixed year: The Police Department will decrease annual fuel use to 12000 gallons by 2025
  - Multiyear: The Police Department will decrease annual fuel use by 1000 gallons per year between 2019 and 2025
  - Short term: The Utilities Department will reduce highest detected total coliform to 1.5 percent by 2019
  - Long term: The Utilities Department will reduce highest detected total coliform to 0.5 percent by 2030
- Individual vs. Group
  - Individual: By 2022 the Controller will create and manage a TIF for renewable energy in the Outer 3rd and Park Ridge East neighborhood.
  - Group: Managers responsible for the buildings occupied by Bloomington City operations will reduce HVAC energy use by 30 percent by 2025.

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Types of Goals

- Absolute vs. directional
  - Absolute: Bloomington will reduce its total fossil-based electricity use by 20 percent by 2030
  - Directional: Bloomington will reverse the rise in greenhouse gas emissions related to transportation by 2025
- Absolute vs. ratio
  - Absolute: Bloomington will cap its total GHG emissions at 1.2M CO_2e by 2023.
  - Ratio: Bloomington will cap its total GHG emissions at 15 tons CO_2e per capita by 2023.
- Zero goals
  - Zero goal: Bloomington will ban the use of plastic bags in grocery stores by 2023.

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Setting Goals: Topics

- Stakeholder feedback: public fora
- Working group study
- Established sustainability frameworks

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Topics covered in Sustainability Tools for Assessing and Rating Communities (STAR) Framework

Built Environment	Climate & Energy	Economy & Jobs	Education, Arts & Community	Equity & Empowerment	Health & Safety	Natural Systems
Ambient Noise & Light	Climate Adaptation	Business Retention & Development	Arts & Culture	Civic Engagement	Active Living	Green Infrastructure
Community Water Systems	Greenhouse Gas Mitigation	Green Market Development	Community Cohesion	Civil & Human Rights	Community Health & Health System	Invasive Species
Compact & Complete Communities	Greening the Energy Supply	Local Economy	Educational Opportunity & Attainment	Environmental Justice	Emergency Prevention & Response	Natural Resource Protection
Housing Affordability	Industrial Sector Resource Efficiency	Quality Jobs & Living Wages	Historic Preservation	Equitable Services & Access	Food Access & Nutrition	Outdoor Air Quality
Infill & Redevelopment	Resource Efficient Buildings	Targeted Industry Development	Social & Cultural Diversity	Human Services	Indoor Air Quality	Water in the Environment
Public Spaces	Resource Efficient Public Infrastructure	Workforce Readiness		Poverty Prevention & Alleviation	Natural & Human Hazards	Working Lands
Transportation Choices	Waste Minimization				Safe Communities	

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Topics covered in ISO 37120: Sustainable Development of Communities

- **Economy** – e.g. unemployment rate, percentage of city population living in poverty
- **Education** – e.g. percentage of students completing secondary education
- **Energy** – e.g. residential electricity usage per capita, energy consumption of public buildings
- **Environment** – e.g. PM 2.5 levels, PM 10 levels, greenhouse gas emissions per capita
- **Finance** – e.g. Debt service ratio
- **Fire and emergency response** – e.g. number of firefighters per 100,000 population
- **Governance** – e.g. voting in last election
- **Health** – e.g. average life expectancy, number of hospital beds per 100,000 population
- **Recreation** – e.g. square meters of public recreation space
- **Safety** – e.g. number of police officers per 100,000 population
- **Shelter** – e.g. percentage of citizens living in slums, number of homeless per 100,000 population
- **Solid waste** – e.g. total municipal waste collected per capita, percentage of waste recycled

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Potential metrics for focus areas

Focus Area – Environmental Quality and Natural Systems	STAR	ISO 37120
Air Quality	Annual concentrations of PM2.5, PM10, and ozone	Annual concentrations of PM2.5, PM10, NO2, SO2, and ozone
Drinking Water Quality	Compliance with EPA Total Coliform Rule and EPA Maximum Containment Levels for turbidity and pathogens for the last 3 years	Percentage of population with potable water supply
Water consumption	Total domestic water consumption per capita	Total domestic water consumption per capita, Total water consumption per capita, Percentage water loss

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Potential metrics for focus areas

Focus Area – Environmental Quality and Natural Systems	STAR	ISO 37120
Solid Waste Management	Percentage of solid waste recycled	Total solid waste per capita, Percentage of solid waste recycled, Percentage of solid waste sent to landfill, Hazardous waste generation per capita, Percentage of hazardous waste recycled
Greenspace protection		Green area per 100,000 population, Annual number of trees planted per 100,000 population

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Potential metrics for focus areas

Focus Area – Environmental Quality and Natural Systems	STAR	ISO 37120
Wastewater management	Compliance with Clean Water Act effluent and reporting guidelines	Percentage of city population served by wastewater collection, Percentage of city's wastewater that has received no treatment, Percentage of the city's wastewater that has received primary treatment, Percentage of city's wastewater that has received secondary treatment

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Potential metrics for focus areas

Focus Area – Transportation	STAR	ISO 37120
Use of Public Transit	Mode split for journey-to-work	Annual number of public transport trips per capita, Percentage of commuters using travel mode other than personal vehicle
Use of Vehicles	Vehicle Miles Traveled, Percentage of residents who own automobiles	Number of personal automobiles per capita
Transportation-Related Fatalities	Number of pedestrian and bicyclist fatalities	Transportation fatalities per 100,000 population
Availability of Bike Paths		Kilometers of bike paths per 100,000 population

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Potential metrics for focus areas

Focus Area – Climate, Energy, and the Built Environment	**STAR**	**ISO 37120**
Electricity usage	Electricity usage in MWh	Total residential energy usage per capita, Energy consumption of public buildings per year
Renewable energy usage	Percentage of electric utility's generating capacity from renewable energy sources	Percentage of total energy derived from renewable sources
Greenhouse gas emissions	Greenhouse gas emissions	Greenhouse gas emissions in tons per capita

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Potential metrics for focus areas

Focus Area – Climate, Energy, and the Built Environment	STAR	ISO 37120
Green vehicle infrastructure	Number of electric vehicle stations per 10,000 residents	NA

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Potential metrics for focus areas

Focus Area – Local Food and Agriculture	STAR	ISO 37120
Food security	Percentage of local farmers markets accepting SNAP based on Community Commons data, Percentage of residents food insecure based on Feeding America's Map the Meal Gap	NA
Access to healthy food	Percentage of residents living in a food desert using USDA's Food Desert Locator	NA
School nutrition	Sales of fresh fruits and vegetables in public school	NA

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Q: How do you eat an elephant?

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A: One bite at a time.

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Setting Goals: Quantities

- Work backward from vision, strategy or larger goal – what are the large goals? What are the component goals for reaching them? **(e.g. 28% reduction in GHG levels by 2025, relative to 2005 levels per Climate Mayors' commitment to meet Paris agreement)**

- Working forward from history – what is the historic performance and how will we improve on that? **(e.g. 10 percent reduction in city building energy use between 2015 and 2018 => set a goal of 30 percent additional by 2023)**

- Based on engineering estimates – what is possible, what will it cost?

- External benchmarks – how are others doing?

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Benchmarking for Goals

- Benchmarking allows organizations to establish what similarly situated or competing organizations have accomplished in their sustainability efforts
- It provides organizations with realistic guidance to evaluate their own performance and to develop their sustainability goals
- It provides feedback
- Sources for benchmarking include
  - Other organizations' sustainability reports
  - Your organization's historic performance
  - Government programs that gather data (e.g. EPA, USDA)
  - Trade associations that establish ranges of potential performance
  - Consulting analysts (e.g., Intertek; Trucost, Eco Notion)
  - Sustainability databases (Asset4, MSCI, Bloomberg)
  - GRI database (for benchmarking reporting)
  - NGOs (e.g., World Business Council for Sustainable Development; Better Buildings Partnership)

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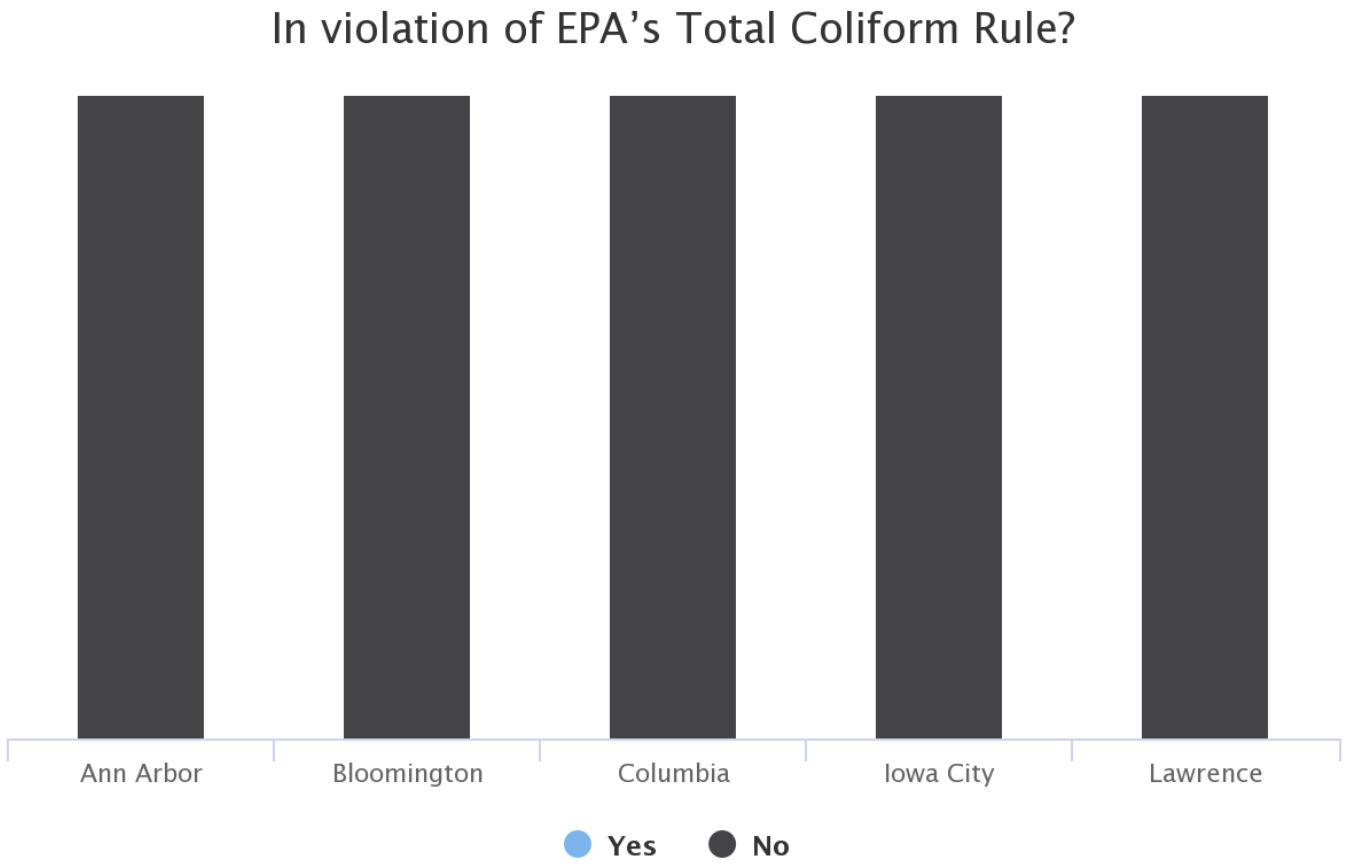
Benchmarking performance with STAR



In 2016
50,292 Community Water Systems in U.S.

21,608 (43 percent) in violation of Total Coliform Rule that limits presence of bacteria, viruses, and parasites in drinking water

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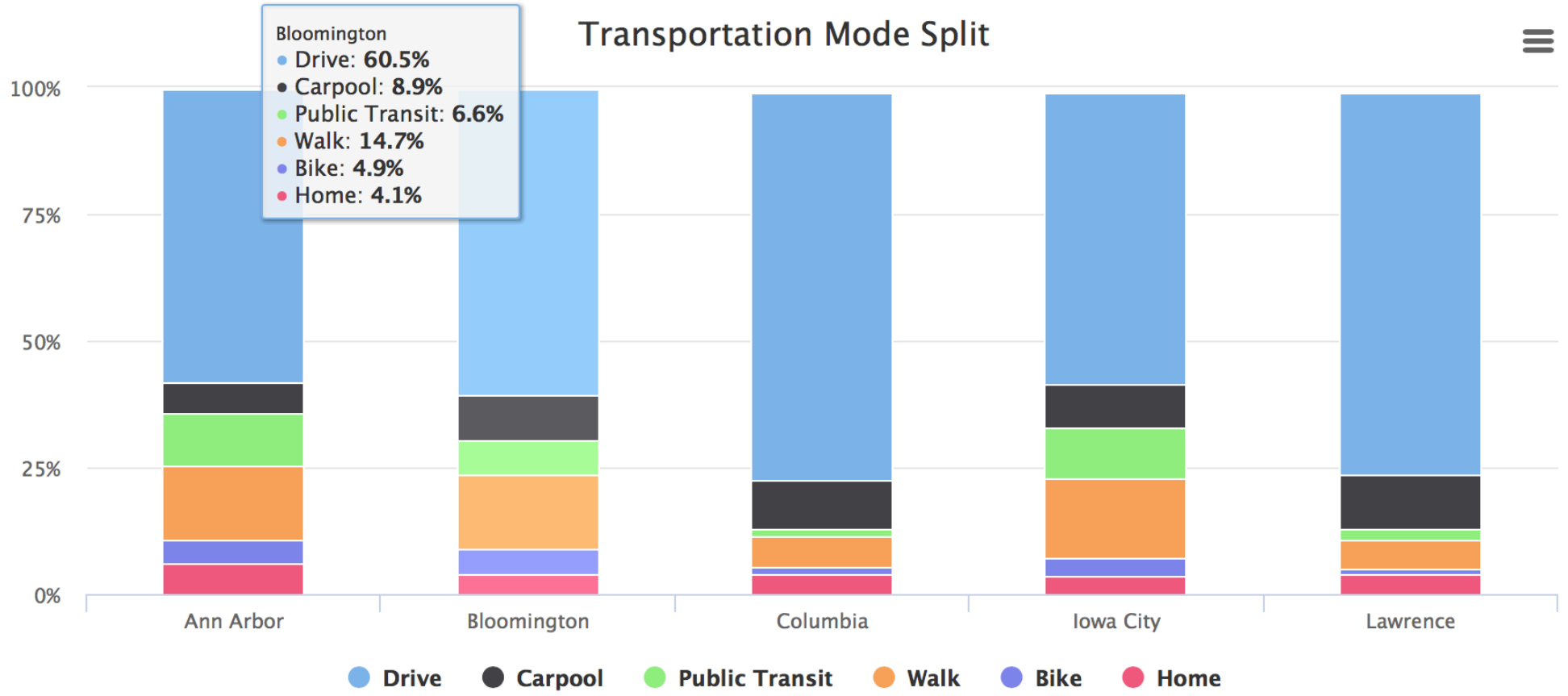
Benchmarking performance with STAR



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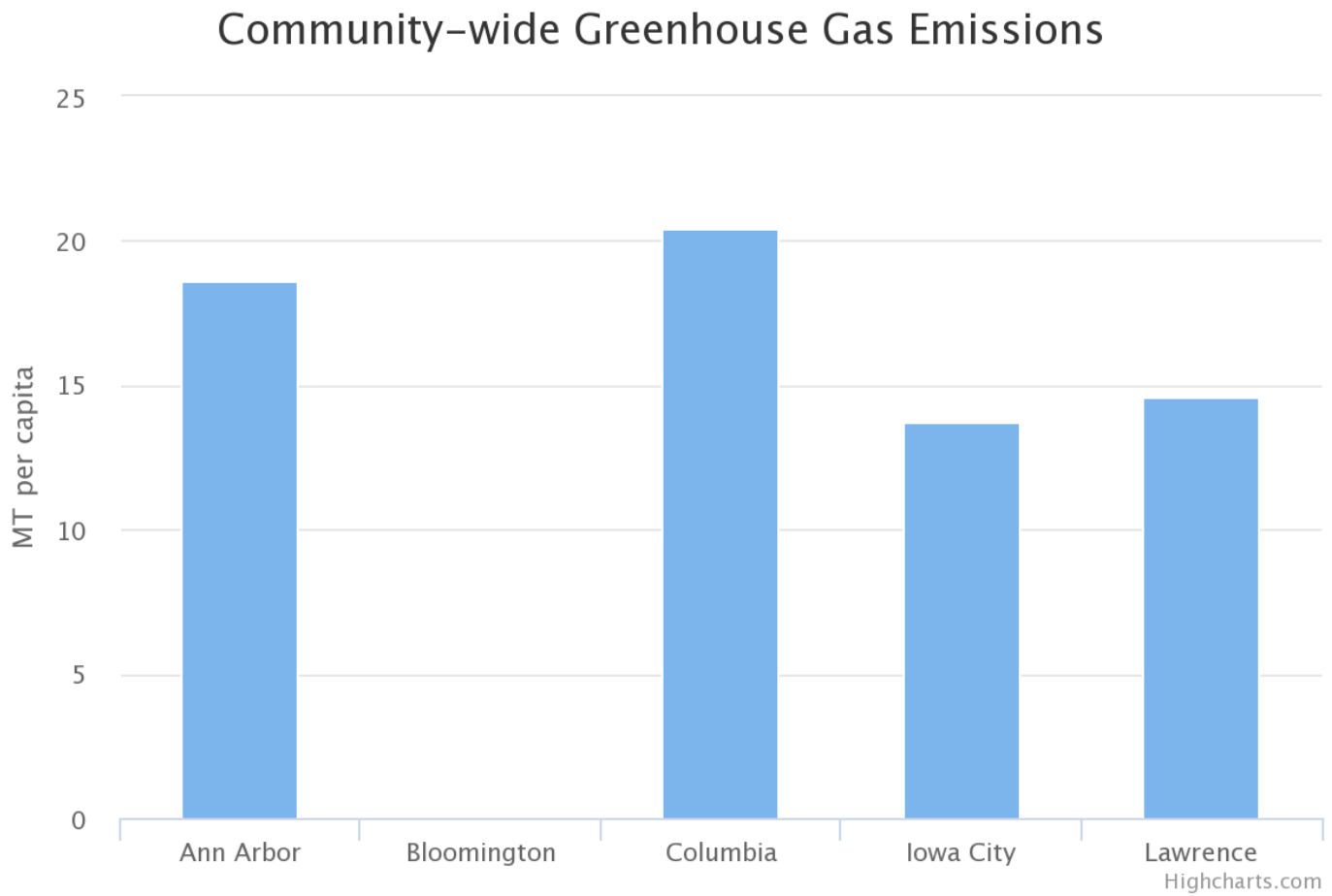
Benchmarking performance with STAR



U.S. Per Capita GHG Emissions (2014)
20 tCO_{2e}

State of Indiana Per Capita GHG Emissions (2014)
38.13 tCO_{2e}

City of Bloomington Per Capita GHG Emissions (2016)
16.3 tCO_{2e}

Sources: WRI CAIT Data Explorer, City of Bloomington GHG Inventory, U.S. Census Bureau

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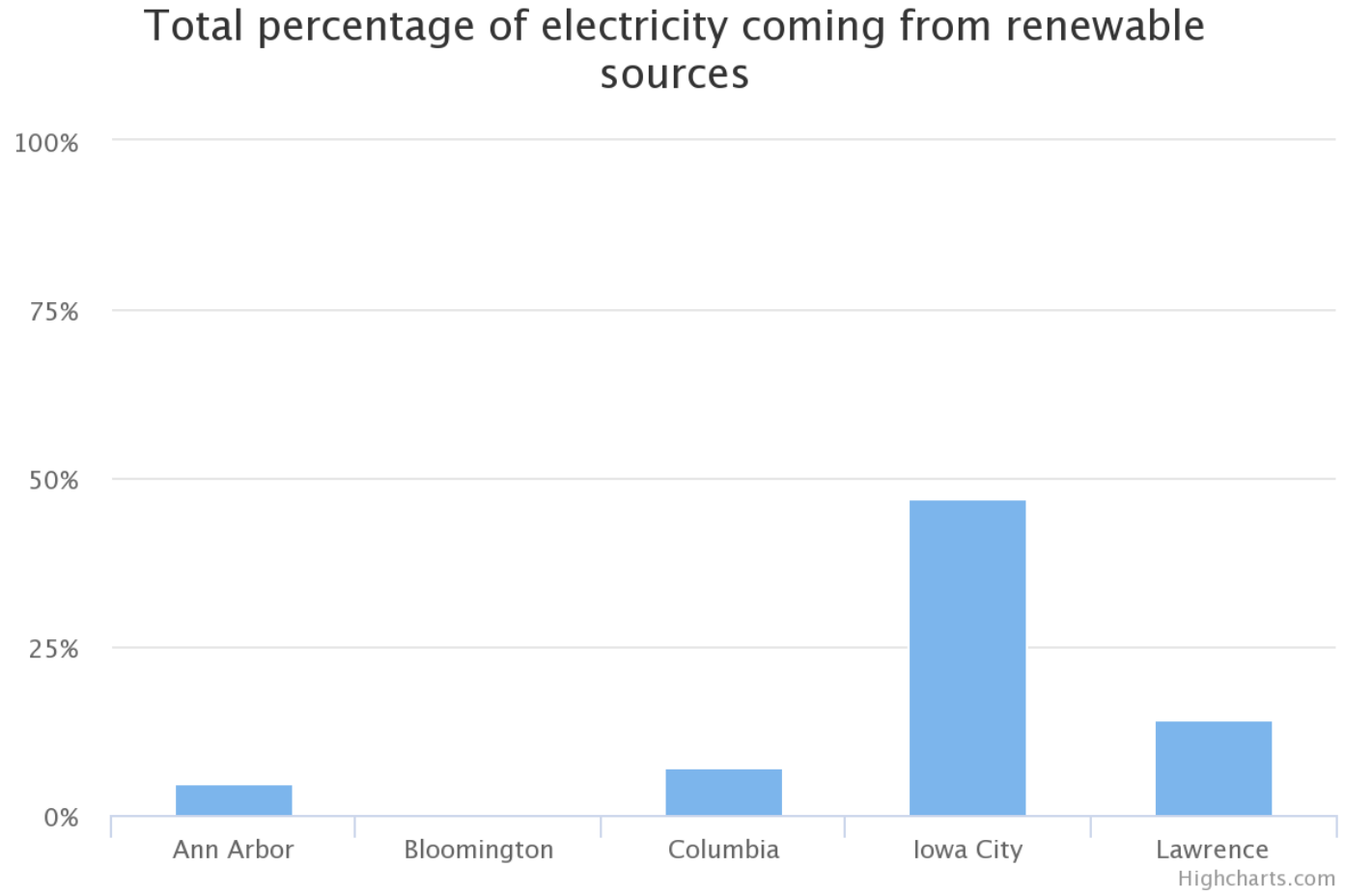
Benchmarking performance with STAR



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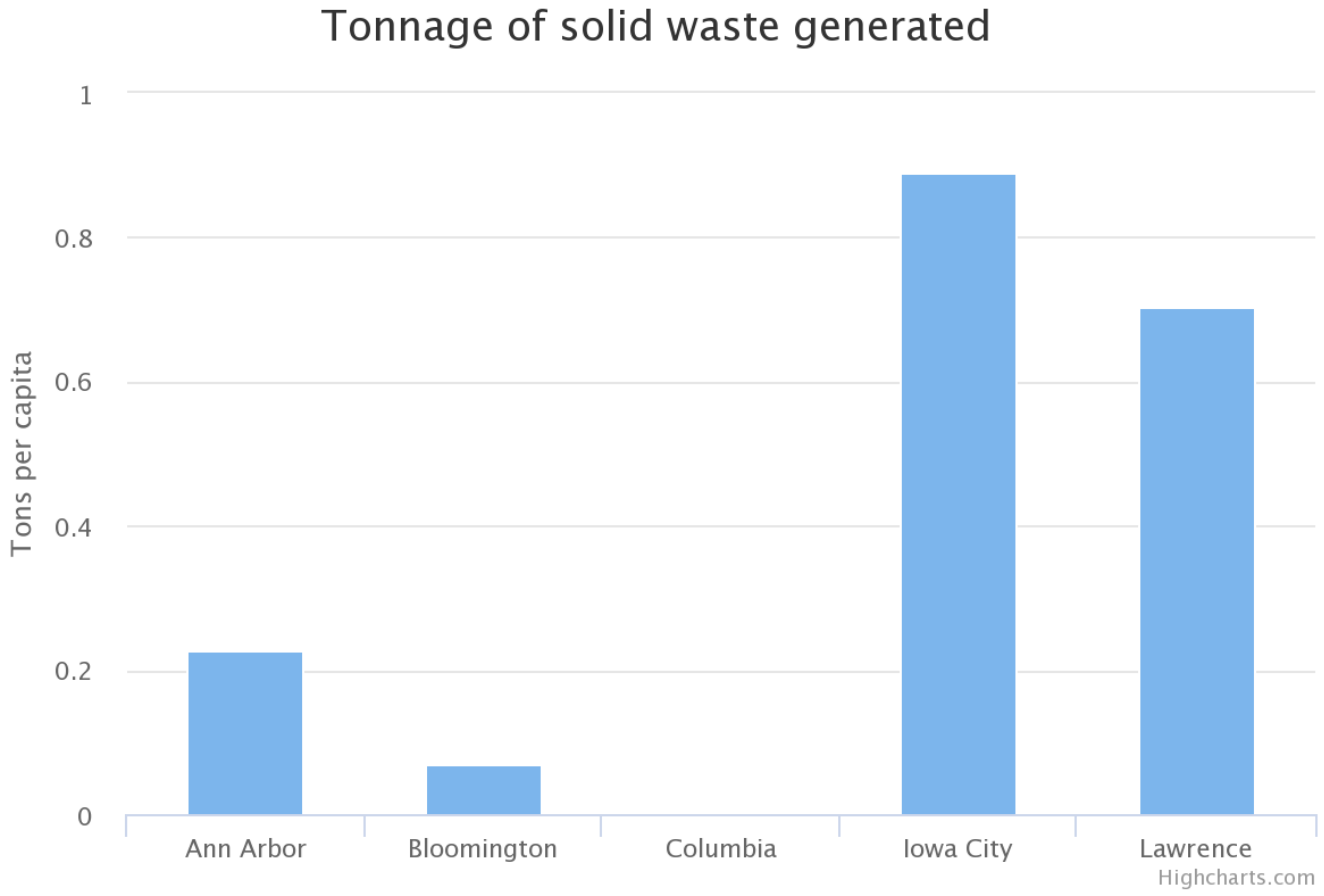

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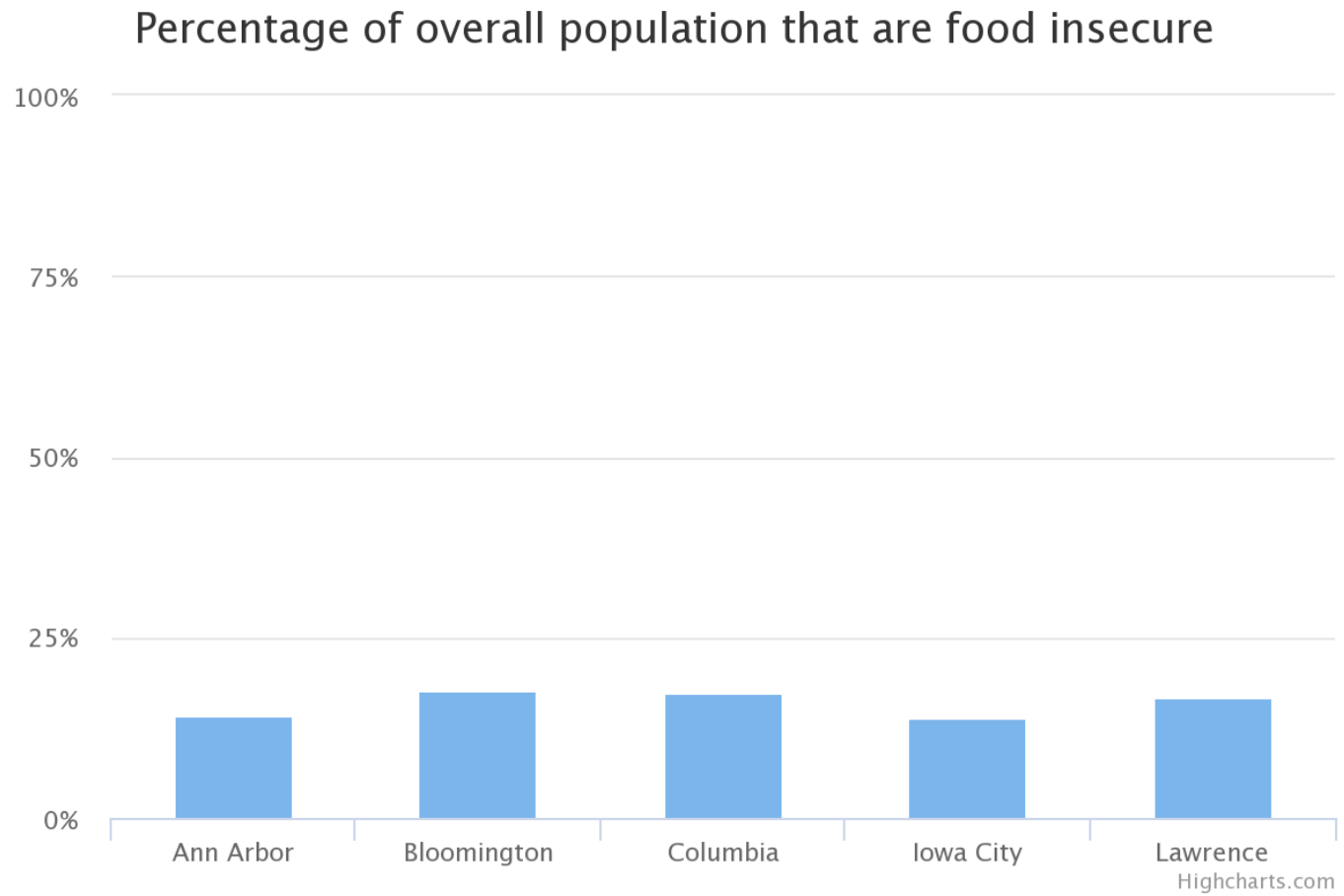

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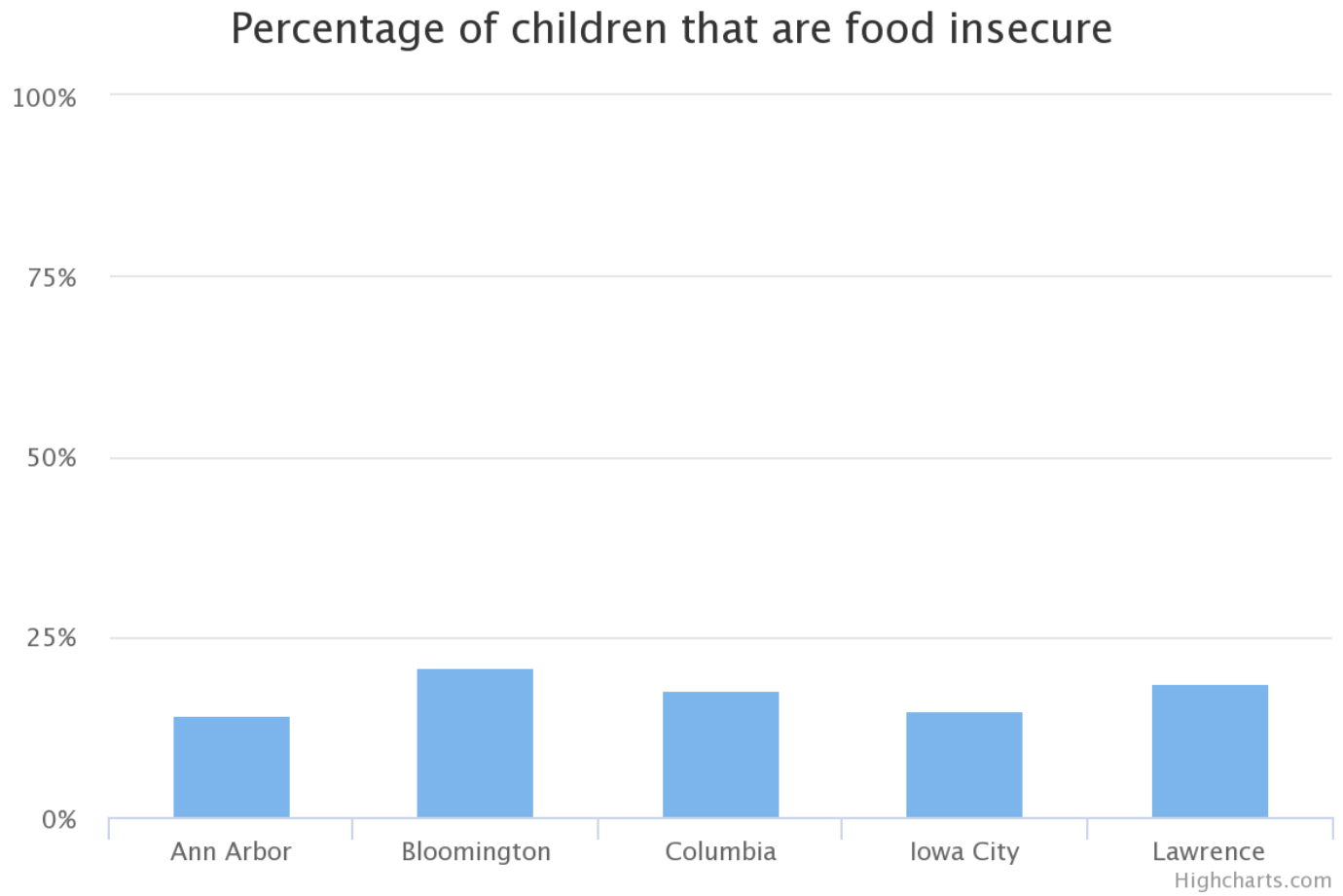
Benchmarking performance with STAR



Why Goals and Indicators Fail to Deliver

The measures aren't credible with intended data users because:

- The measures are based on unreliable, sparse, or old data
- The measures are being collected, compiled, and/or reported by people who are not trained or held accountable for doing so
- The meaning of the measures isn't clear
- The measures are not thought to be valuable or a priority by those who must perform to produce the desired results, or are not linked to important objectives of those people
- The people whose performance is needed for results are not aware of the measured results
- There are confounding factors other than those intended to be stimulated or controlled that affect the results; the cause-effect relationship is unclear; the actions needed to improve performance under the measure are not clear

Why Goals and Indicators Fail to Deliver (cont.)

- The use of the measures isn't readily visible; management isn't interested in the results
- There are too many measures or they are reported too frequently, which overwhelms data compilers and users
- Results are reported too infrequently to keep the organization on course
- There are too few measures and their context relative to other factors isn't well understood, e.g., having bus ridership figures without bus emissions figures
- Not enough time is allowed for corrective actions to take effect; goals are too short-term
- There is no accountability or recognition for performance under the measure
- Goal targets are unrealistic
- The goals drive the wrong performance
- The results aren't reported clearly or with sufficient details and explanation
- The results aren't used to make business decisions

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Action: Operations

Example City Sustainability Actions

- Restore riparian habitat on Boulder County properties (Boulder County, CO)
- Introduce food waste composting at all city sponsored events (Louisville, KY)
- Offer free public transit as City employee benefit
- Purchase renewable energy generated electricity to reach carbon neutrality of city operations (Boulder County, CO)
- Increase recycling containers for city employees, make recycling mandatory, and incorporate recycling processes into City employee handbook and orientation procedures
- Introduce 11 new hybrid buses into the City bus fleet in 2013 (Louisville, KY)
- Obtain LEED certification for all new public buildings (Chicago, IL)
- Reduce salt usage in snow removal programs (Chicago, IL)

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Action: Operations

Example City Sustainability Actions

- Installation of solar and geothermal projects at public housing (Ann Arbor, MI)
- Use tunneling to improve storm water management (Chicago, IL)
- Install green alleys to assist with storm water management (Chicago, IL)
- Replacement of existing parking lots with pervious surfaces (Louisville, KY)
- All Boulder County buildings will be eligible for Energy Star Label by 2014 (Guess who, CO)

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Action: Operations

Recommendations for Implementation

- Keep your strategic plan simple enough for all employees to understand
- Lead by example to encourage sustainable behaviors among employees
- Appoint a Strategic Plan Manager to keep everyone on track
- Create a Strategic Plan Poster as a daily reminder to employees of organizational goals
- Hold monthly strategy meetings to track progress
- Use a balanced scorecard to track progress
- Tie raises to performance
- Celebrate your successes with employees

Adapted From: www.mystrategicplan.com

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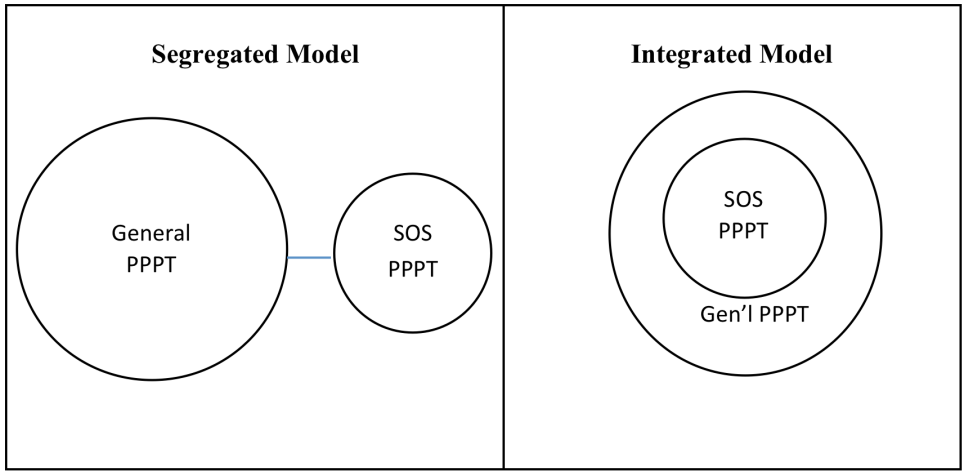
Action: Operations

Integrated and Segregated Models of Deployment

PPPT=Policies, Procedures, Practices and Tools, including for example:

- Value statements and policies
- Standard operating procedures (SOP)
- Emergency/crisis response procedures
- Supplier selection criteria
- Product and service development criteria
- Job descriptions
- Customer, community, and employee surveys
- Internal award criteria
- Employee success factors
- New employee orientation
- Bonus criteria
- Performance and promotional reports
- Planning procedures
- Auditing checklists
- Management programs (Total Quality Management, etc.)
- Regular agenda items for staff meetings



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Action: Operations

Common Deployment Tools

Audit checklists	Employee meeting discussions	Manuals	Self-assessment checklists
Award celebrations	E-reports	Memos	Skits, role-playing performances
Award criteria	E-training programs (live, on-demand, simulations, interactive, etc.)	Model personal performance objectives	Symbolic activities (tree planting, public donation, etc.)
Brochures	Executive speeches	Newsletters, magazines	Tapes, CDs, other recordings
Customer testimonial	Exhibits, models, samples	Phone mail messages	Training-evaluation forms, tests
Diagrams, drawings	Films, photos	Posters, flags	Training presentations
Display booths at company fairs	Frequently asked questions	Press releases	Train-the-trainer presentations, guides
Employee announcements board	Learning maps	Promotional items (calendars, pens, etc.)	Websites

From Blackburn 2007, *The Sustainability Handbook : The Complete Management Guide to Achieving Social, Economic and Environmental Responsibility*

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Action: Governance

Example City Sustainability Actions

- Increasing block price for water to encourage water conservation (Chatham County, NC)
- Water conservation education program (San Antonio, TX)
- Development of 100 miles of protected bicycle lanes over a 4 year period (Chicago, IL)
- Development of restaurant grease recycling program that reuses grease as a fuel source (San Francisco, CA)
- Online energy efficiency workshops for renters, landlords, and homeowners (Duluth, MN)
- Green building program (Palo Alto, CA)
- Energy performance ratings for commercial buildings (Washington, DC)
- Energy conservation audits for commercial buildings (Austin, TX)
- Use of LED street light and signal technology (Arlington County, VA)
- Establishment of Zero Waste Commission to advise city council on solid waste policies (Austin, TX)
- Food waste recycling (Tacoma, WA)
- Initiative to create incentives for grocery stores in low-income areas (New Orleans, LA)

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Action: Governance

Example City Sustainability Actions

- Community gardening initiative of 100 gardens (Des Moines, IA)
- Legal requirements for removal of invasive species (Portland, OR)
- Partnership for habitat protection – Marine Corps, Nature Conservancy, and NC Wildlife Resources Commission (Jacksonville, NC)
- Double the number of LEED certified buildings (Chicago, IL)
- Improved traffic light coordination (Louisville, KY)
- Expanded recycling for commercial buildings, restaurants, and retail stores (Louisville, KY)

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Action: Governance

Recommendations for Implementation

- Keep your strategic plan simple enough for all citizens to understand
- Publish the plan in multiple formats, designed for accessibility
- Appoint a Strategic Plan Manager to field questions and keep everyone on track
- Create a media plan to remind citizens of city goals
- Hold periodic public strategy meetings to track progress
- Develop partnerships with supportive civic organizations, churches and schools
- Provide a dashboard to update citizens on progress
- Develop recognition programs to recognize important contributions
- Celebrate the cities successes with citizens

Adapted From: www.mystrategicplan.com

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Action: Governance

Sidebar: Policy Implementation Questions

Example: Suppose a goal of the SAP is to increase distributed renewable energy production in Bloomington

- If distributed renewable energy makes sense for Bloomington, why is it not happening already?
- What parties need to change their decision-making for renewable energy to spread?
- What policy tools could the City of Bloomington use to encourage these improvements?

Action: Governance

Sidebar: Understanding Policy Instruments

- What are the four core dimensions of this proposed policy instrument taxonomy?
  - Dimension 1: The source of the problem (underlying market failure)
  - Dimension 2: The fundamental role of government
  - Dimension 3: The extent of private discretion
  - Dimension 4: The distribution of economic burden

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Action: Governance

The Basic Structure of the Taxonomy

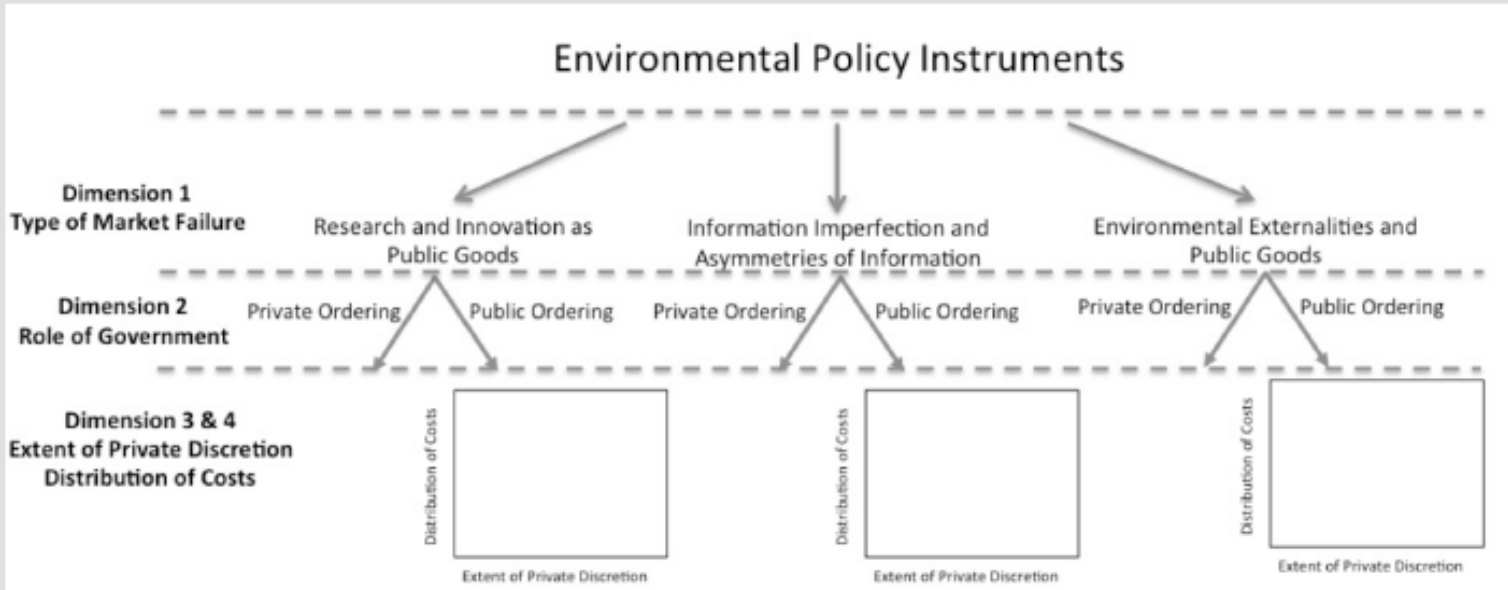

Figure 5.6: The Basic Structure of the Taxonomy of Environmental Policy Instruments; Dimensions 1 and 2 are discrete or categorical dimensions; Dimensions 3 and 4, which lie on the public ordering branches only, are continuous dimensions, creating a policy instrument space.

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Recommendations for Data Tracking

Data Gathering

- Where will the data come from?
- Who will provide the data?
- How and when will the data be supplied?
- Who will provide instructions to the data providers and answer questions?
- How will data providers be held accountable for meeting reporting requirements?

Data Processing and Evaluation

- Who will review and compile the data?
- Who will track the timeliness and accuracy of data?
- How will data be converted and presented in the performance report?
- Who will maintain documentation on raw data?
- Where and how long will data be kept?

Data Sharing and Use

- Who will assess the appropriateness of the goal/indicator and the data collection process?
- How can goals/indicators or data collected be modified?

After Blackburn, Chapter 7

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Recommendations for Data Tracking

- Potentially involves enlisting many people from a broad range of units throughout the enterprise; this is your data team
- Importance of clear definitions for monitoring (E.g., What is a minority? What is a hazardous waste?)
- Watch for units (e.g., kilograms vs. pounds, CO_2 vs. carbon)
- Work with field personnel to train and motivate
- Gather data frequently enough to make it a habit
- Use data tools judiciously (e.g., sensors, remote meters, data processing tools, dashboards)
- Evaluate, analyze and share
- Provide feedback to data team

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The Role of Dashboards

The Sustainability Action Plan establishes 38 indicators to measure progress towards the 16 Sustainability Framework goals. This dashboard provides progress reports on indicators and tracks completed projects and accomplishments. Information on indicators is available on the theme or goal pages. The goals and indicators are organized into the four theme areas of the Sustainability Framework:

SustainA²ble
Cultivating our people, place and potential

Climate and Energy

Goal	Progress
Sustainable Energy	→
Energy Conservation	→
Sustainable Buildings	→

Key

Where are we now?

Good | Fair | Poor | Not Assessed

Where are we going?

Getting Better | Stable

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Action

UNC-Chapel Hill Recovered 5,279 tons of material in FY 2016!
That's the same as saving...

512,474
gallons of gas

Enough to drive from Chapel Hill to NYC and back 14,235 times

20,503
trees

Twice as many trees as there are on UNC Chapel Hill's campus

8,385,874
gallons of water

Enough to fill Bowman Grey Memorial Pool 9 Times

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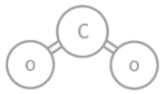
Action

University of Washington Sustainability Dashboard

click on an icon to explore metrics, or learn about the Sustainability Dashboard



GREENHOUSE GASES


COMMUTING


ELECTRICITY


WATER


BUILDING CONSTRUCTION


PAPER


FOOD


LANDFILL REDUCTION


HAZARDOUS WASTE

UTILITY COSTS

DISPOSAL COST


GREEN TEAMS

SUSTAINABILITY GRADE

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Action

STAR Reporting Framework

- Created by ICLEI (the International Council for Local Environmental Initiatives), the U.S. Green Building Council, the Center for American Progress, and the National League of Cities
- Involved 200 stakeholders from 50 cities and counties between 2008 and 2012
- Used by more than 100 U.S. cities
- Compatible with CDP Cities, GRI, and ISO 37120
- Certification and rating program (750 points; ~70 % of points can be achieved through actions)
  - 3 Star Community (Recognized for sustainability leadership) – 250 – 449 points
    E.g. Columbia, MO; St. Petersburg, FL; and Fayetteville, AR
  - 4 Star Community (Recognized for national excellence) – 450 – 649 points
    E.g. Ann Arbor, MI; Austin, TX; Indianapolis, IN; and Louisville, KY
  - 5 Star Community (Recognized as top tier achiever in national sustainability) – 650+ points
    E.g. Seattle, WA and Cambridge, MA

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Thank You

Stephanie Hayes Richards, MBA, MPA
stephanie@gnarlytreesustainability.com

Kenneth Richards, PhD, JD
kenricha@indiana.edu