

Sustainable Code Development Workshop

The Sustainable Community Comprehensive Plan

Sustainable Cities Network - ASU

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Overview

- Sustainability in the comprehensive plan
- Key sustainability plan elements and topics
- Sustainable community plan examples



Why Sustainable Community Planning?

Sustainability is...

*aligning our **built environment** and
socioeconomic activities with
the **natural systems** that support
life...with future generations in mind*

...Good Planning

Sustainability and Planning

- Underlying values of sustainability are those of traditional plans:
 - A long range view
 - Integration of local and regional
 - An environmental, social, and economic component
 - Focus on goals, policies, & implementation

Sustainability and Planning

But ...

The convergence of global environmental and energy issues warrants a **new approach!**



Sustainable Community Plans

What Can Planners do Better?

- More integrated approach: **environmental, economic and social concerns**
- Address sustainability topics
- Be current – use all tools
- Encourage a global perspective
- More emphasis on benchmarking and accountability
- Inform and raise awareness
- Think of future generations



Typical Plan Elements - Triad

Community

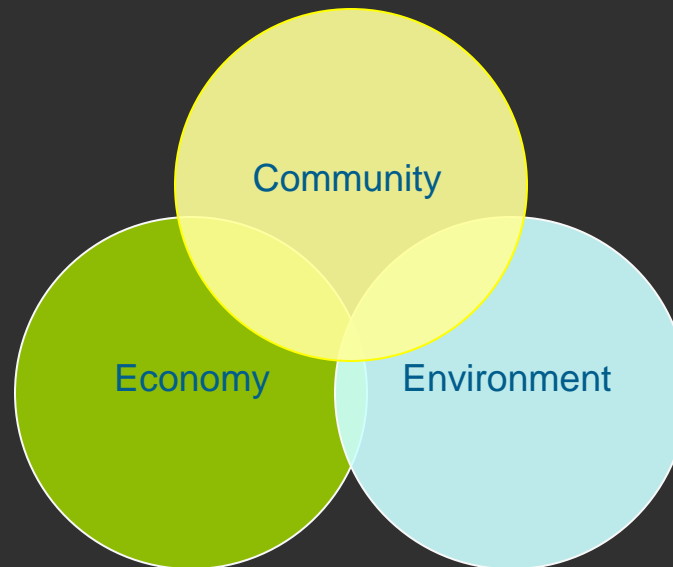
- Appearance and Design
- Arts and Culture
- Economic Development
- Parks and Recreation

Built Environment

- Community Facilities & Infrastructure
- Housing/ Neighborhoods
- Land Use and Growth
- Transportation

Natural Environment

- Air Quality
- Environmental Resources
- Environmental Hazards
- Open Space



Sustainable Plan Elements

Community

- Appearance and Design
- Arts and Culture
- Economic Development
- Parks and Recreation
- Community Health & Safety
- Fiscal Sustainability
- Diversity
- Housing Attainability

Built Environment

- Community Facilities & Infrastructure
- Housing/Neighborhoods
- Land Use and Growth
- Transportation/Mobility
- Energy Conservation & Green Building
- Green Infrastructure

Natural Environment

- Air Quality
- Environmental Resources
- Environmental Hazards
- Open Space
- Atmosphere and Climate Change
- Waste Stream Reduction/Reuse
- Agriculture
- Food Production & Security
- Renewable Energy

Use Organizing Principles

- Why is this important?
- What are the desired outcomes/goals?
- How will results be achieved?
- How will success be measured?



Measuring Sustainability

- **Indicator** - measurement used to demonstrate movement toward or away from plan goals.
- **Benchmark** - established “starting point” for an indicator.
- **Target** - a quantifiable outcome that provides a framework for measuring progress.

*See Sustainable Seattle and Marin County

Example:

Indicator:

Number of residents within $\frac{1}{4}$ mile of a city park

Benchmark:

50% of city residents are within $\frac{1}{4}$ mile of a city park in 2009

Target:

80% of city residents within $\frac{1}{4}$ mile of a city park by 2020

How Success Is Measured

INDICATOR	BENCHMARK	TARGET
Number of dwelling units within $\frac{1}{2}$ mile of a transit stop	82,773 dwelling units	89,997 dwelling units
Energy use per capita countywide	16,636 kWh unincorporated per capita in 2000	Reduce consumption of electricity per capita 10% by 2020
Total megawatts of photovoltaic systems installed countywide	0.0255 MW in 2000	15 MW by 2015 and 30 MW by 2020
Total megawatts of photovoltaic systems installed by County government	0 MW in 2000	0.5 MW by 2010 and 1 MW by 2015

Key Sustainability Topics

- Energy Conservation & Renewable Energy
- Climate Change
- Water Conservation
- Waste Reduction & Reuse
- Food Production & Nutrition
- Community Health & Safety
- Mobility-Connectivity
- Housing Diversity & Attainability
- Urban Forestry



Key Sustainability Topic Snapshot:

Energy

Why is this important?

- 85% of all energy use derived from fossil fuels in USA - dependent!
- Unsustainable economics of energy costs
- National security concerns
- Buildings use 71% electricity in U.S.



Key Sustainability Topic Snapshot:

Energy

Why is this important?

- Increasing role of renewable energy in the market - demand is up/\$ down
- Costs reduced to municipalities and consumers (i.e., water treatment & pumping)



Key Sustainability Topic Snapshot:

Energy

Example goals, policies, strategies:

- Reduce per-capita nonrenewable energy use
 - ✓ Adopt energy efficiency standards for development
 - ✓ Offer incentives for renewables
 - ✓ Encourage retrofits



Key Sustainability Topic Snapshot:

Energy

Example plan goals, policies, strategies:

- Increase % of energy from renewable sources
 - ✓ Protect renewable sources and sites
 - ✓ Adopt green building standards and practices
 - ✓ Incentivize renewable energy-codes & review processes

Key Sustainability Topic: Energy

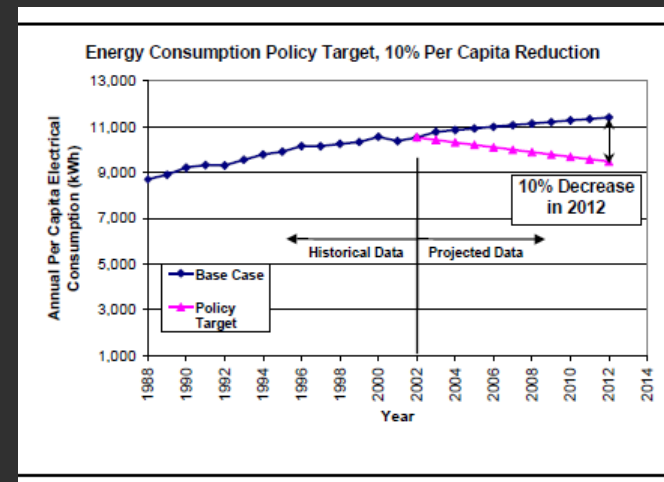
How will success be measured?

- Annual residential and non-residential energy use
- Number of photovoltaic / WEC installations
- % of energy supply from renewable sources

INDICATOR	BENCHMARK	TARGET
Energy use per capita countywide	16,636 kWh unincorporated per capita in 2000	Reduce consumption of electricity per capita 10% by 2020
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Sources:

- Utility agencies
- Building permits

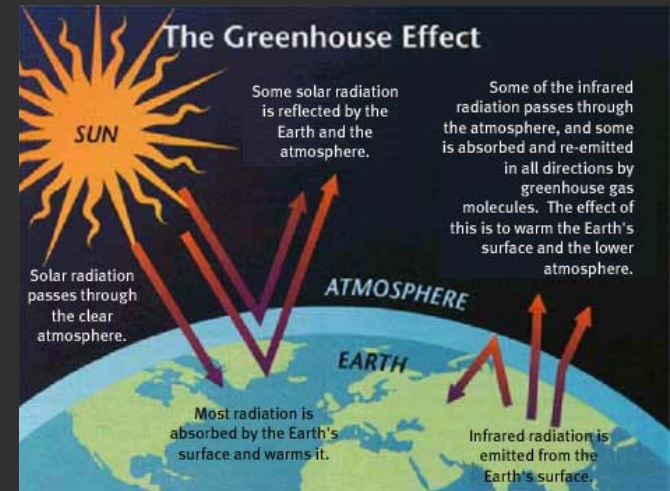


Key Sustainability Topic Snapshot:

Climate Change

Why is this important?

- GHGs seen as the leading cause of climate change
 - 2/3 of U.S. carbon emissions from transportation and building energy use
- Impacts on storm frequency and severity
- Air quality and associated community health impacts



Climate Change

Example plan goals, policies, strategies:

- Reduce greenhouse gas (GHG) emissions and airborne pollutants
 - ✓ Reduce car use
 - ✓ Increase urban tree canopy coverage
 - ✓ Land use patterns



Climate Change

Example plan goals, policies, strategies:

- Reduce vehicle-generated emissions
 - ✓ Implement mixed-use and transit-oriented development patterns
 - ✓ Programs to reduce VMT and encourage non-vehicle or transit travel
 - ✓ Reduce or manage travel demands (carpooling, work-from home)
 - ✓ Tree protection & planting standards

Key Sustainability Topic Snapshot:

Climate Change

How will success be measured?

- Amount of GHG emissions citywide
- Number of days with poor/good air quality
- Tree canopy coverage (or total number of urban trees)
- VMT



Sources:

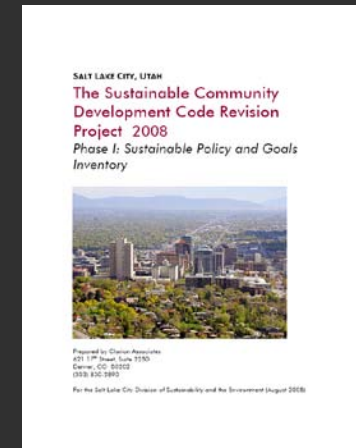
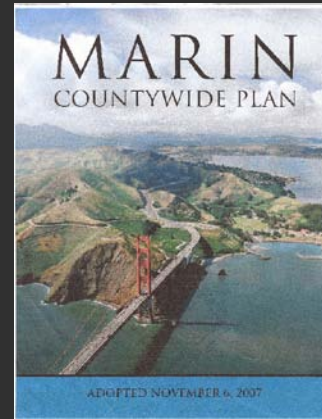
- Air quality agencies
- State DOTs
- Public health agencies
- Forestry programs

INDICATOR	BENCHMARK	TARGET
Number of days of poor air quality per federal and state guidelines	No exceedences in 2000	No increase through 2015
Amount of greenhouse gas emissions countywide	3,005,674 tons CO2 in 1990 and 3,252,049 in 2000	Reduce 15% by 2015
Amount of greenhouse gas emissions from County government sources	16,857 tons CO2 in 1990	Reduce 15%–20% by 2015

Sustainable Plan Examples

Varying approaches:

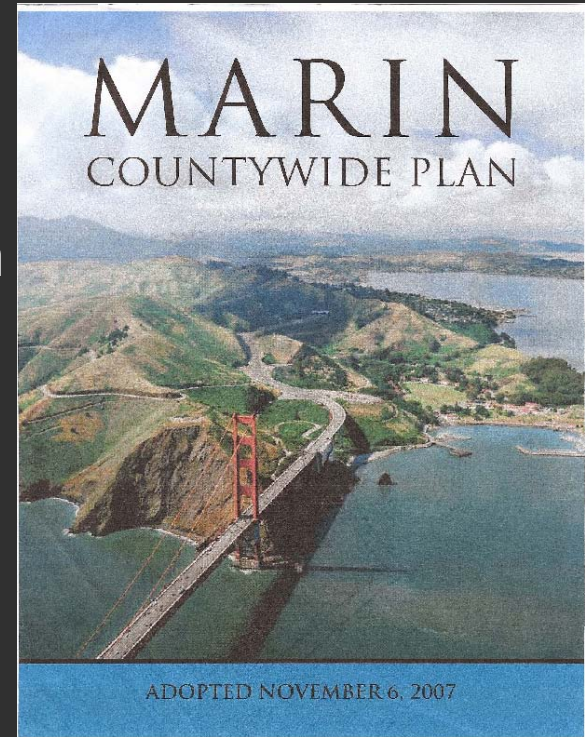
- Comprehensive rewrite
- Targeted amendments
- Inventory of current plans to code revisions



Marin County, CA

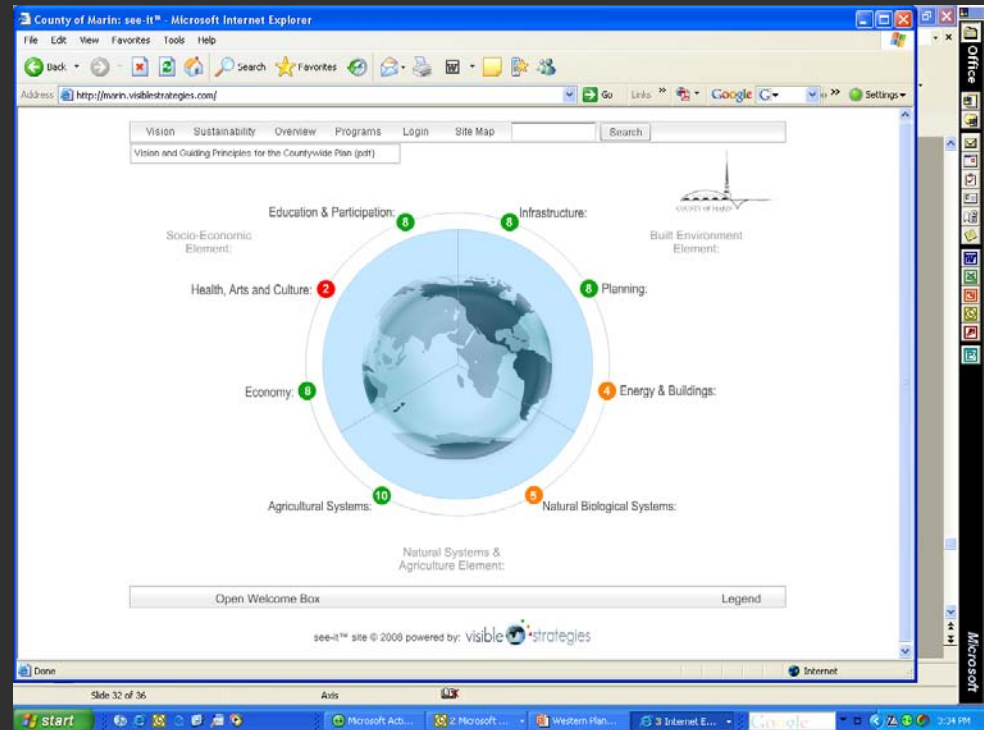
Sustainable Community Theme

- 2007 major update adopting “Sustainable Community” theme with major refocus
- Includes climate change, food production, social equity, public health, child care, environmental justice, economy, more
- 5-6 year process
- 600+ pages
- www.future-marin.org



Marin County, CA

- Documented GHG emissions by sector and calculated ecological footprint
- Specific indicators, benchmarks, and targets for all subject areas
- Identified responsibility, priority, timeframe and budget for accomplishing



New York City



Key focus areas:

Land

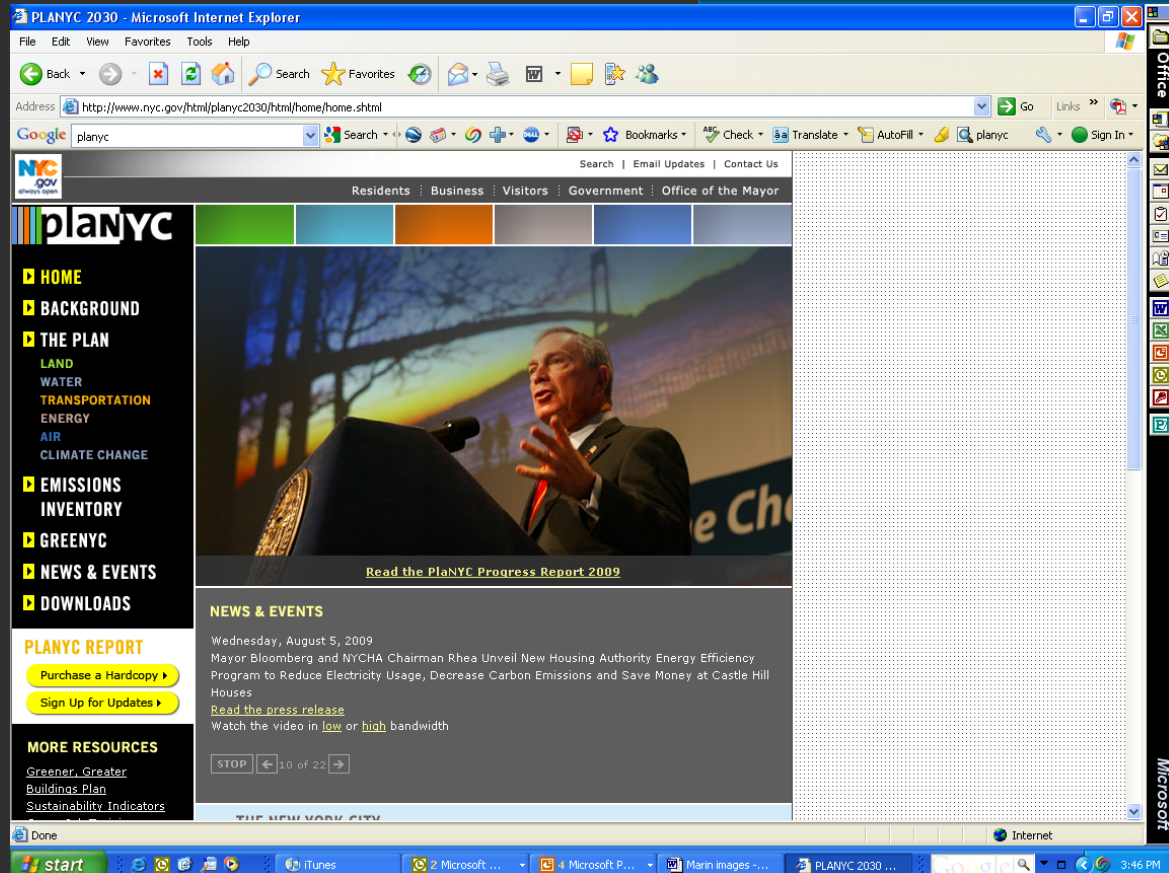
Water

Transportation

Energy

Air quality

Climate change



Ten Key Goals (focus areas)



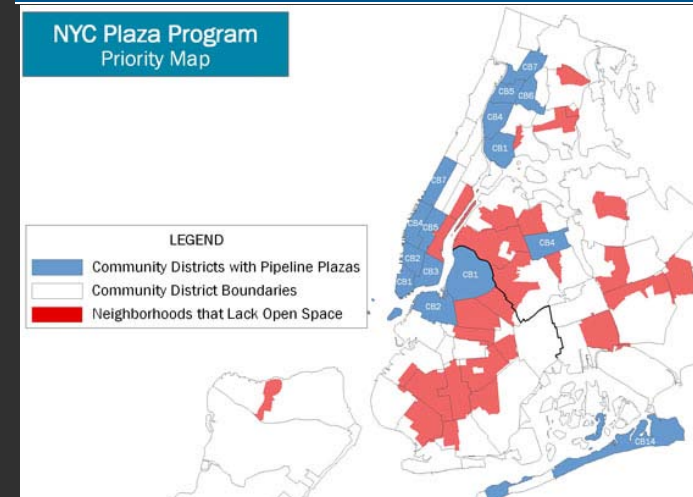
Land-practical goals!

Housing - Create homes for almost a million New Yorkers, while making housing more affordable and sustainable

Open Space - Ensure that all New Yorkers live within a 10 minute walk of a park

Brownfields - Clean up all contaminated land in NYC

2009 MILESTONE UPDATES	PERCENT OF TOTAL
35 milestones complete	28%
50 milestones on time	39%
35 milestones delayed	28%
7 milestones redirected*	5%



- Major update to:
 - City Plan
 - Transportation Master Plan
- Builds on previous accomplishments and strong commitment to sustainability



New Plan Topics

- Climate Change
 - Fiscal Sustainability
 - Health and Wellness
 - Arts and Culture
 - Utilities (Electric, Stormwater, Water, Wastewater)
-
- Focus on connections between topics (systems)



Blueprint Boise

New Comp Plan:

- Climate Change
- Energy Conservation and Alternatives
- Air & Water Quality
- Development patterns-connect to public facilities, mobility, & utilities
- Mixed use centers
- Arts & culture focus



Salt Lake City Approach

Steps in the Process:

Plan Inventory → Code Diagnosis → Code

- Focus on ten sustainability topics
- Revise code in areas where plans/policies support sustainability

California – Plans Are Changing!

- AB 32-Global Warming Solutions Act
- SB 97-Address GHG & climate change in Development/City/CEQA
- SB 375-Reduce VMTs
- CARB asked for 15% GHG redux by 2020
HOW?
land use, buildings, water use, and transportation
- Climate Action plans → General Plans

Commerce City, Colorado

Why Sustainability in the Comp Plan?

The industrial history of Commerce City has made the community even more aware of the environment and the consequences of unsustainable practices related to:

- Pollution
- Waste
- Transportation
- Land use



Sustainability in Commerce City?

- Critical 1st Step is to determine if sustainability is even a Community Value
- Early Public Outreach efforts focused on this question
- Result - C3 Vision Plan is “Comprehensive and Sustainable”



Sustainability Vision

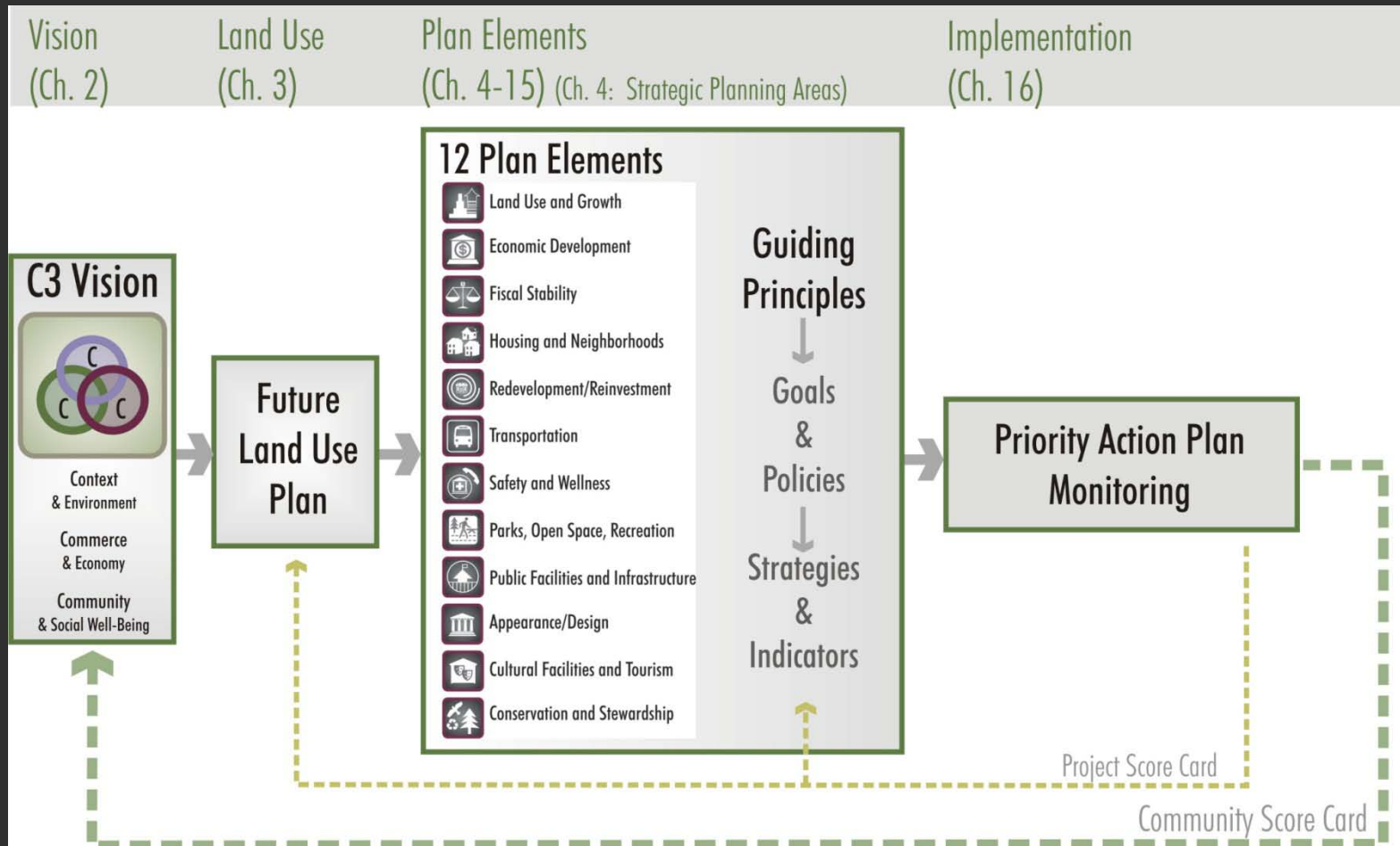
- This C3 Vision Plan addresses community sustainability by linking the City's goals to the three Cs of Sustainability:
 - Commerce and Economy
 - Context and Environment
 - Community and Social Well-Being

More than “just environmental”!



C3 Sustainability Integration

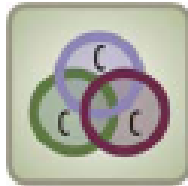
Sustainability Concepts Integrated Throughout the Plan



C3 Integrated Approach

- In each chapter, found the ways in which each chapter address the “3 C’s”

Sustainability/Related Chapters



This Element Contributes to Sustainability...

Redevelopment and infill contribute to achieving the sustainability triad. The goals in this chapter help:

A Robust Economy and Commerce:



- ✓ Support revenue-producing businesses in the city.
- ✓ Balance revenues with service expenditures by maintaining a strong industrial and revenue-producing base.

A Quality Environmental Context:



- ✓ Create vibrant new and revitalized mixed-use centers for shopping, services, and civic activities.
- ✓ Strengthen neighborhoods, walkability, and their connections with open space, parks, schools, and services.
- ✓ Increase transportation and energy efficiency by clustering activities.
- ✓ Conserve land by promoting higher densities and recycling underutilized properties.

A Resilient Community:



- ✓ Add opportunities for jobs, housing, and social activity.
- ✓ Increase opportunities for healthy outdoor living and walkability.
- ✓ Conserve resources for future generations.
- ✓ Preserve a sense of place/history.

Focus within Individual Chapter

Specific Goals within Chapter 15
are somewhat typical

For Example:

- Develop a Sustainability Plan
- Improve energy efficiency and increase renewable energy use
- Reduce greenhouse gas emissions
- Increase water conservation



Closing Thoughts

- Tailor your approach to fit the needs/values of your community
- Build in an implementation component
- Institutionalize monitoring and change
- Build in linkages and show how community parts fit together



Sustainable Code Workshop

The Sustainable Community Comprehensive Plan

Thank you!

Questions & Comments

