

ZONING **PRACTICE**

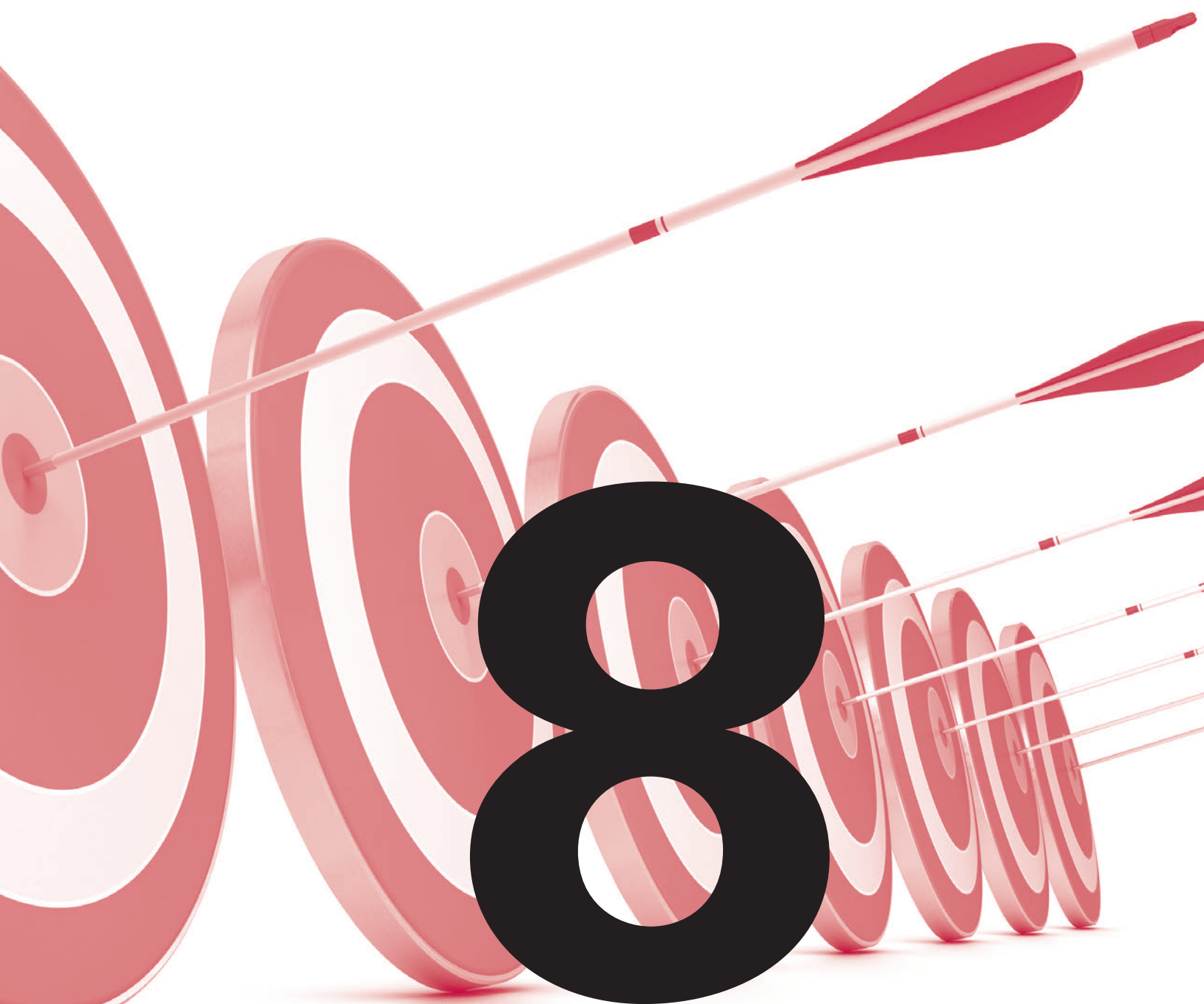
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Code-Ready Sustainable Planning: Reducing the Gap Between What Plans Say and What Codes Do

By Douglas Farr

In a time of tight municipal budgets, planning is under pressure to prove that plans produce short- and long-term benefits.

In addition, there are growing expectations that planning has a central role in addressing urgent societal issues related to sustainability, such as active living and obesity, mobility choice and auto dependence, and climate change mitigation, resilience and adaptation. Together these dual trends of low budgets and high expectations exert pressure on the practice of planning to focus on more effective implementation of ever-more-precise outcomes. In order to help planners and code writers respond effectively to these trends, this article focuses on reducing the gap between what plans say and what codes permit and require—the realm in which plan effectiveness often breaks down.

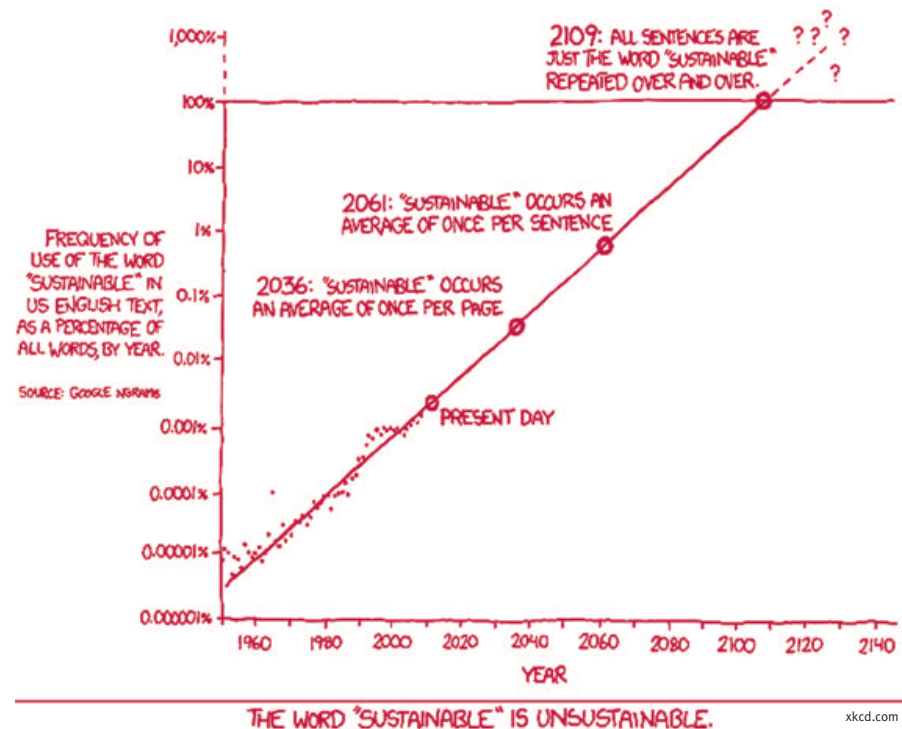
THE CURRENT GAP BETWEEN PLANS AND CODES

The relationship between plans and codes got off to a rough start. Burnham's 1909 Plan of Chicago, long regarded as the model of a comprehensive city plan, referenced neither subdivision nor zoning codes. As most planners know, such codes were first enabled and widely adopted by municipalities long after Burnham's death in 1912. The Burnham plan was widely copied as a model of effective planning despite not relying on codes for its implementation. However, this disconnect between plans and codes was flagged as a concern very early on. Harland Bartholomew, the first full-time planner employed by an American city, was among the first prominent planners to see the benefits of plans-code coordination. As one of the authors of the Standard Zoning Enabling Act (SZEa) of 1926 he wrote, "Zoning is an es-

sentia part of the city plan and ought never to be considered separately" (Knack et al. 1996).

Despite this vision of a plan-code unity, the final language in the zoning enabling legislation established a relatively weak connection between the emerging fields of planning and zoning: "Such (zoning) regulations shall be made in accordance with a comprehensive plan . . ." In legal terms, "in accordance with" is much less precise and rigorous than a more muscular phrase such as "in strict con-

formity with." Lawsuits brought by real estate interests that were denied permits over the last 90 years have defined the elasticity of the allowable legal gap between plans and codes. Given that this relatively weak language first appeared in the third and final draft of the SZEa and that the Standard City Planning Enabling Act wouldn't be written until two years later in 1928, planners should probably be thankful that a legal connection was made between plans and codes at all.



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About the Author

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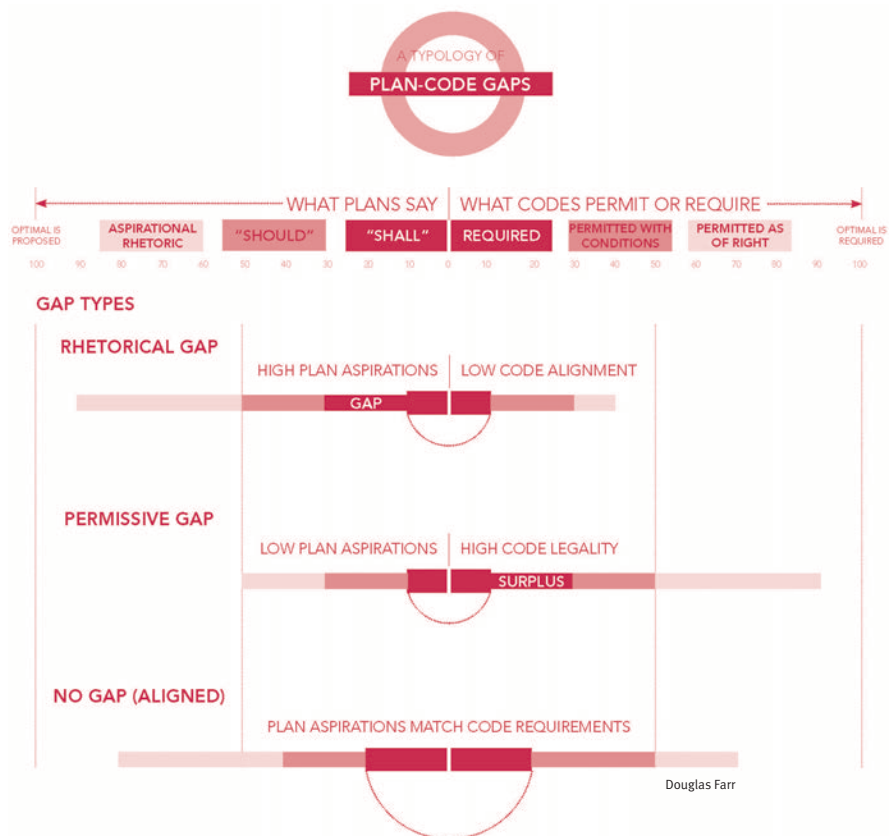
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The Inevitability of a Plan-Code Gap

Given this loose relationship between plans and ordinances and the institutional, political, and professional forces at play, the existence of a gap in what plans say and what codes authorize is inevitable without strategic effort.

While a continuous planning and coding process is an ideal within the land-use arena, this may not be a priority for a municipal government. A code update can often seem like a low priority at a time of layoffs, and spending additional money to develop a better or more complete planning process can also be a hard sell. Some municipalities will wait to learn the results of a plan before budgeting for follow-up work, such as a code update. This can lead to a timing gap between the adoption of a plan and the subsequent code that will implement the plan's policies.

A gap between plans and codes is also inevitable given the complexities and politics associated with regional or citywide master plans and ordinances. Changing codes is a political act that vested interests resistant to change can play to their advantage. Part of what makes powerful political interests effective is the ability to pick their battles and venues. Rather than take a public position in opposition to a popular plan, they may choose to exert influence far from the public eye. Every planner who has developed a plan is familiar with the process of wordsmithing that can go on behind the scenes to satisfy different constituencies. As a consequence, there is often intense pressure to refrain from being specific.



Nevertheless, the profession has driven innovations in land-use planning, mapping, and modeling precision that have made it possible to demand a level of specificity. For example, the U.S. Department of Housing and Urban Development has funded sustainability plans across the country through its Sustainability Communities Initiative that require the tracking of sustainability indicators, and the

California legislature passed AB32 and SB375, two laws that link climate change and land use. These initiatives highlight an increasing demand for strong technical criteria leading to clear outcomes and planning accountability. Only recently, however, have third-party criteria become specific enough to be able to translate sustainability-related words into performance standards suitable for inclusion

in codes and standards. Unfortunately, the application of these emerging tools has not been widely disseminated within the planning profession.

Training Planners to Identify the Plan-Code Gap

This gap between what plans promote versus what codes permit or require can be very hard to detect. In most cases, a word search is of no use in hunting down these disconnects. Consider these real world case studies:

Case Study #1: A suburban comprehensive plan calls for the community to be “safe and walkable,” while the subdivision code requires a minimum street width of 31 feet, a minimum block length of 600 feet, and permits a maximum block length of 1,800 feet. In addition, the residential zoning establishes minimum lot sizes of 8,000 square feet and permits front drive-ways.

Identifying these gaps requires some knowledge about pedestrian safety, street design, and vehicular speed. The severity or lethality of pedestrian-vehicular accidents is proportionate to vehicle speed, with several studies suggesting about a five percent fatality rate at 20 mph and 45 percent at 30 mph (Leaf and Preusser 1999). The minimum street width required in the subdivision code, combined with the presumption that virtually all cars will be parked off-street, invites higher vehicular speeds. Even with a posted speed limit of 20 mph, the speed at which traffic will actually travel based on these design factors, especially if the street is straight, may be closer to 30 mph. Public health research shows that pedestrians strongly prefer to walk in areas with high street connectivity (i.e., shorter block lengths and few dead-end streets) (Brownson et al. 2009). Block lengths of 600 to 1,800 feet do not support a walk-friendly place.

This gap analysis does not end at analyzing street widths and block lengths. Additional information from the zoning and subdivision code including any required parkway widths, minimum sidewalk widths, and the inclusion of on-street parking all affect street design speed, pedestrian safety, and the desire to walk. It is important that planners have a base understanding of how all these elements interact and that they are trained to identify these gaps when they exist.

Case Study #2: A town adopts a complete streets policy that emphasizes the use of streets by bicycles and automobiles. The town also adopts an ordinance governing bicycling.

Identifying this gap requires research. A cursory review via a word search might have concluded that the town had enacted a bicycle ordinance and that no gap existed. However, the first line of the ordinance requires bicyclists to ride on sidewalks and not the roadway, except in business districts or along streets without sidewalks.

Case Study #3: The preamble from a recent comprehensive plan states that one of the primary goals of the plan is to “introduce language to address the trend toward sustainability.” The plan’s objectives and policy statements frequently use soft verbs, such as encourage and promote, without providing specific criteria or metrics.

IMPLEMENTATION METRICS

PLANNING TOPICS	REFERENCE METRICS
Affordability-Comprehensive	H + T Affordability Index
Automobile Independence	Walk Score
Bikability	Bike Score
Complete Neighborhoods	Sustainable Urbanism: Neighborhood Criteria
Reduced Traffic Deaths	Chicago Forward: Department of Transportation Action Agenda
Transit-Support Municipality	Transit Score
Energy Efficient Buildings	Architecture 2030
Vehicle Miles Traveled (VMT) Reduction	Architecture 2030
Affordable Housing	LEED-ND: NPD c4: Mixed Income Diverse Communities: Option 2
Car-Free Housing	Transportation Sustainability Research Center, University of California-Berkely: Car Free Housing Research
Compact Development	LEED-ND: NPD p2: Compact Development
Connected Community	LEED-ND: NPD p3: Connected & Open Community
	LEED-ND: NPD c6: Street Network
LEED-Neighborhood Development	LEED-ND: All NPD Prerequisites
Life-Cycle Housing	LEED-ND: NPD c4: Mixed Income Diverse Communities: Option 1
Mixed Use Development	LEED-ND: NPD c3: Mixed Use Neighborhood Centers
Net-Zero Energy Buildings	Living Building Challenge
Parks, Open Space & Recreation	LEED-ND: NPD c9: Access to Civic & Public Space
Recreational Facilities	LEED-ND: NPD c10: Access to Recreational Facilities
Reduced Auto Dependence	LEED-ND: SLL c3: Locations with Reduced Automobile Dependence
Storm Water Management	LEED-ND: GIB c8: Stormwater Management
Transit-Supportive Development	LEED-ND: NPD p2: Compact Development, Option 1
Density to Support Walk-To Retail	Sustainable Urbanism: Neighborhood Retail Supportive Density
Walkable Streets	LEED-ND: NPD p1: Walkable Streets
Walkability	Hall Walkability Index

The gap here is both passive and glaring. While there is no doubt the author of this plan was well intentioned in wanting to “address” important issues of the day using sustainability language, a plan is a course of action, not simply an introduction of language. Without clear directives for action, there is no plan. If there is no actionable plan, the community will have a big plan-code gap.

STRENGTH OF RECOMMENDATIONS			POLICY OR CODE
Weak	Moderate	Strong	
POLICY OBJECTIVES			
Max Combined Housing & Transportation Expenses are 55% or less of Income	Max Combined Housing & Transportation Expenses are 50% or less of Income	Max Combined Housing & Transportation Expenses are 45% or less of Income	Policy
Somewhat Walkable: 50-69 Score	Highly Walkable: 70-89 Score	Walker's Paradise: 90-100 Score	Policy
Bikeable: 50-69 Score	Highly Bikeable: 70-89 Score	Biker's Paradise: 90-100 Score	Policy
Meets 3 Criteria	Meets 4 Criteria	Meet all 5 Criteria	Policy, Map, & Codes
Goal: Reduce pedestrian & bicycle crash injuries by 50%	Goal: Reduce pedestrian & bicycle crash injuries by 75%	Goal: Zero pedestrian & bicycle deaths	Policy & Subdivision
Good Transit: 50-69 Score	Excellent Transit: 70-89 Score	Rider's Paradise: 90-100 Score	Policy & Map
Building energy use reduced by 60%	Building energy use reduced by 80%	Building energy use reduced by 100%	Policy
VMT reduced by 10%	VMT reduced by 20%	VMT reduced by 35%	Policy
CODE-SPECIFIC PERFORMANCE TARGETS			
2 points: Permit per neighborhood	1 point: Require per neighborhood	2 points: Require per block	Zoning
Permit by Special Permit	Permit by Zone	Permit Citywide	Zoning
p2: Permit densities citywide	p2: Require densities in some zones	p2: Require densities citywide	Zoning
p3: Permit street network connectivity level citywide	p3: Require street network connectivity level in some zones	p3: Require street network connectivity level citywide	Subdivision
	c6: Achieve 1 point	c6: Achieve 2 points	Subdivision
Permit citywide	Require in certain zones	Require citywide	Subdivision & Zoning
2 points: Permit diverse housing types per neighborhood	1 point: Require diverse housing types per neighborhood	2 points: Require diverse housing types per block	Zoning
Permit minimum 7 "diverse uses" per neighborhood	Permit minimum 11 "diverse uses" per neighborhood	Require minimum 4 "diverse uses" per neighborhood	Zoning Code & Map
Adopt current IECC EE Code	Require buildings be Net-Zero Ready (Austin, TX)	Require Living Building Challenge Net-Zero certification	Building Code
Require 1 point citywide	Require 1 point in certain zones	Require 1 point citywide	Policy, Map, & Codes
Require 1 point citywide	Require 1 point in certain zones	Require 1 point citywide	Policy, Map, & Codes
4 points: Eliminate parking minimums	5 points: Permit car-free housing	7 points: Require car-free housing	Policy, Map, & Codes
2 points: Require rainfall retention on site	3 points: Require rainfall retention on site	4 points: Require rainfall retention on site	Codes & Public Works
p2: Permit in transit corridors	p2: Require in transit corridors	p2: Require citywide	Policy, Map, & Codes
Permit 1,000 dwelling units within 5 minute walk	Require 500 dwelling units within 5 minute walk	Require 1,000 dwelling units within 5 minute walk	Zoning Code & Map
Permit citywide	Require in certain zones	Require in certain zones	Policy & Map
Basic: 30-49 points	Moderate: 50-69 points	Very High: 70 - 100 points	Policy & Map

Douglas Farr

The Plan-Code Gap Devalues Planning

Over the long term, the plan-code gap erodes confidence in the effectiveness of planning. Municipalities prepare plans to address specific opportunities or concerns and to move

their communities forward. The failure to execute on high priority goals and objectives may well result in reduced economic productivity and community well-being. In addition, community members who participate in a master-planning process have a rea-

sonable expectation that the plan will be implemented as written. A delayed or poor implementation devalues their investment of time and energy. Such an outcome further undermines the perceived effectiveness of planning, making planning harder to "sell" and appears to work against many of the aspirational principles of the American Institute of Certified Planners Code of Ethics. Taken together, the plan-code gap should be of great concern to the planning profession and the goal of reducing the gap and increasing plan effectiveness should be the focus of leading practitioners.

Illustrating Plan-Code Gap Types

The graphic on page 3 illustrates a typology of plan-code gaps using three prototypes: the rhetorical, the permissive, and the aligned. While a municipality can have elements of all three types across its regulatory portfolio, this article proposes that the aligned type should be the ideal.

The rhetorical type occurs when a plan uses aspirational language that is not translated into developmental regulations. A symptom of this type is the use of buzz words such as green, sustainable, or walkable that are not translated into performance criteria and only weakly linked to implementation. To non-planners this approach appears to overpromise benefits and under-deliver on results, reinforcing the idea that planning is "pie-in-the-sky" and ultimately ineffective.

The permissive type refers to a laissez-faire-based local planning system where plans are nonexistent or obsolete. The threat posed by this typology is its permissiveness in permitting long-lived and irreversible development practices that are decidedly not in the public's interest, such as a strict separation of land uses and automobile-oriented street and lot designs. This approach can resonate with constituencies who may see all government strictures or interventions as bad.

The aligned type seeks to match plan recommendations with specific development regulations. Using this

RESOURCES

- ◆ Brownson, Ross C., Christine M. Hoehner, Kristen Day, Ann Forsyth, and James F. Sallis. 2009. "Measuring the Built Environment for Physical Activity: State of the Science." *American Journal of Preventative Medicine*, 36(4): 99–123. Available at www.ncbi.nlm.nih.gov/pmc/articles/PMC2844244.
- ◆ Center for Neighborhood Technology. 2013. "H+T Affordability Index." Available at <http://htaindex.cnt.org/map>.
- ◆ Farr, Douglas. 2008. *Sustainable Urbanism*. Hoboken, New Jersey: John Wiley & Sons.
- ◆ Knack, Ruth, Stuart Meck, and Israel Stollman. 1996. "The Real Story Behind the Standard Planning and Zoning Acts of the 1920s." *Land Use Law and Zoning Digest*, February. Available at www.planning.org/growingsmart/pdf/LULZDFeb96.pdf.
- ◆ Hall Planning and Engineering, Inc. 2012. "HPE's Walkability Index." Available at www.hpe-inc.com/walkability-index.html.
- ◆ Leaf, W.A., and D.F. Preusser. 1999. *Literature Review on Vehicle Travel Speeds and Pedestrian Injuries*. Washington, D.C.: U.S. Department of Transportation. Available at www.nhtsa.gov/people/injury/research/pub/hs809012.html.
- ◆ U.S. Green Building Council. 2009. "LEED for Neighborhood Development." Available at www.usgbc.org/neighborhoods.
- ◆ Walk Score: www.walkscore.com.
- ◆ Walk Score. 2013. "Get Your Bike Score." Available at www.walkscore.com/bike.
- ◆ Walk Score. 2013. "Get Your Transit Score." Available at www.walkscore.com/transit.

To increase effectiveness, planners can focus on the part they have the greatest control over—the planning process—to increase the depth of support for implementing an ambitious plan.

approach, an objective should appear in the implementation section of a plan only if the planning process has revealed ample support for its implementation, which is a model of planning effectiveness. Specific objectives that fail to garner support may appear as initiatives lacking support.

THE TWO PARTS OF CODE-READY SUSTAINABLE PLANNING

Code-ready sustainable planning is made up of two parts: high performance planning and code-specific recommendations.

High-performance planning describes a planning process rooted in evidence-based sustainability metrics. Given that recent research documents how our land-development patterns contribute to physical activity levels, pedestrian and bike safety, housing and transportation affordability, and climate resiliency, high-performance planning is necessary to quickly increase the planning profession's effectiveness in a time of tight budgets and sometimes strident opposition.

Code-specific recommendations are plan policies and action items written in language strong and precise enough to guide the development of regulatory provisions that will help achieve the plan's goals and objectives. In other words, code-specific recommendations provide clarity about how a particular recommendation will be implemented.

PUTTING CODE-READY SUSTAINABLE PLANNING INTO PRACTICE

In *The Seven Habits of Highly Effective People*, author Steven Covey wrote that in order to be effective, one must "begin with the end in mind." An aspirational "end" to a planning effort can seem hard to attain given the fragmentation in how plans and their implementation are authorized and governed. In order to

increase effectiveness, planners can focus on the part they have the greatest control over—the planning process—to increase the depth of support for implementing an ambitious plan. In this effort, the green building industry may have experience of value to planners.

Use High-Performance Sustainable Planning Criteria

For more than 15 years, the green building movement has applied this "end-in-mind" thinking to the design of sustainable buildings in an approach called "integrated design." This approach has many parallels with the high-performance approach to planning proposed herein. An integrated design approach brings together everyone who will eventually have the responsibility for implementing the plan early in the process. The facilitators present, debate, and commit to a menu of strategic choices, along with their costs and benefits. Think of these as a project's bones. In integrated building design it usually refers to structural or mechanical systems. The analog in planning is a two-stage process: the first involving big policy decisions and the second, the level of performance to be written into code. To illustrate how this approach can work, the table on pages 4 and 5 provides an initial listing of policy objectives and code-specific performance targets.

This table is divided into aspirational policy objectives and code-specific performance targets. Both objectives and targets are proposed at three levels of aspiration: weak, moderate, and strong. In setting up this hierarchy, the expectation is not that municipalities will opt to adopt a strong policy on every topic but rather that the planning process will identify those measures for which the community is most strongly committed. Any municipality that adopts policies from these ambitious targets is likely to earn positive recognition for doing so.

The policy objectives at the top of the chart can be used to structure the visioning phase of any land-use planning process. Many of the references in the table are provided by third-party websites that are currently used to market real estate but, paradoxically, are not conventionally used to plan land use and development. While some communities may have the capacity to develop their own transparent measurement systems and reference targets, many others will not. While these third-party metrics may not be perfect, the fact that they are already in widespread use and freely available to anyone with Internet access makes their performance targets attractive options for policy objectives. However, because these scoring systems have proprietary methodologies that may change without warning, their scores are not suitable to serve as code references.

The policy objectives have a one-to-many relationship with the code-ready references below. For instance, increasing walkability must be approached comprehensively through path and street design, urban design, and the location and clustering of destinations.

Focus on the Strength of Plan Recommendation Language

When it comes to writing recommendations or action items, planners often try to capture one of two sentiments: the consensus of all the parties to the planning process or the lowest level of unanimous agreement of the governing body. This tricky balancing act produces recommendations ranging from those that say and do a lot to those that say and do little or nothing. A plan's action items create the most value when they spur tangible action. The following list of plan recommendation approaches is ordered from weakest to strongest:

1. Mentioning a topic or action (i.e., "a shout-out")
2. Using soft verbs such as *promote* (i.e., non-specific support for action)
3. To allow an action (i.e., permission to take a specific action)
4. To offer incentives for an action (i.e., rewarding a specific action)

5. A firm requirement or mandate (i.e., requiring a specific action)

A Litmus Test for Code-Ready Sustainable Planning

Leading planners may already prepare plans following an approach similar to that described herein. How does the high-performance planning proposed herein differ from good planning? In order to make a market for this high-value approach to planning it needs to draw attention to points of distinction. To facilitate demand, the following checklist can serve as a litmus test for high-performance planning. (Note that this list can be used to help write RFQs and RFPs in exchange for describing the project using the term Code-Ready Sustainable Planning.)

1. During the data collection phase, audit local policy, codes, and public works practices against the policy objectives and code-specific performance targets above (and additional issues of local concern) to identify barriers to adopting these approaches.
2. Throughout the planning process convene all of the parties who will be involved in approving or implementing the recommendations of the plan.
3. At the beginning of the planning process, convene a long-format meeting to
 - introduce high-performance planning and illustrate the idea that a given topic can be effectively addressed with different levels of rigor;
 - introduce code-specific language and present each of the code-specific performance targets along with a best understanding of the order-of-magnitude costs and benefits of each target; and
 - poll the community and stakeholders on each topic to identify information gaps, new topics of local concern, and issues for which there is consensus.
4. Repeat item three above until each topic has arrived at consensus. This may take place later in the same meeting or in a future meeting. (The consensus on a given topic may be that there is no support for a high-performance outcome, in which case the plan should document this outcome.)

5. Prepare studies to test and demonstrate what results these policies achieve on the ground and what level of sustainable performance targets they can achieve.

6. Convene a long-format meeting to review these design and performance alternatives and to arrive at consensus on the level of regulatory performance to be recommended.

7. Draft recommendations that link to specific policy or regulatory actions, organized according to the authority charged with implementing them. Avoid informational recommendations and those using soft verbs.

8. Conduct a broad plan-adoption process so that each authority asked to take action on the plan votes separately to implement their designated responsibilities.

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ARE YOUR PLAN OBJECTIVES
PRECISE ENOUGH TO GUIDE
SPECIFIC ZONING PROVISIONS?

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