

# Planning Densification from the Start

Density increasingly is prescribed by those seeking to improve U.S. cities. At the same time, it is becoming harder to accomplish. A move to a process that systemically preplans density in key locations can help projects overcome obstacles.

A KEY OBSTACLE TO BUILDING density in the United States is that first construction often occurs in low-activity, low-value markets, such as the suburban fringe or in early phases of infill and redevelopment projects. Associated low revenue streams preclude high-density development. Once low-density construction occurs, the assets have a long functional life—commonly 40 to 80 years or more—with commitments that are barriers to change, even though surrounding markets often experience value increases.

Markets change; buildings do not. Especially in key locations, economic and environmental value is lost because of the lack of synchronization between in-place construction and the surrounding market—and the loss accrues. (See Figure 1.) Loss occurs because the additional density is not built even though

market growth might support it, and it accrues with each day of suboptimal density. It is realized by many stakeholders, including owners and developers, in terms of value not captured. In the case of municipalities, loss is realized in reduced returns on infrastructure investment, lower tax revenue, reduced regional economic competitiveness, and lost vitality. For transit agencies, loss is realized in lower density around stations; for environmental advocates, it is the lost opportunity to place more effective urban forms in key locations.

In order to transform accruing losses into accruing gains, the process of planned densification prescribes four methods to preplan increased density for sites, buildings, blocks, and regions. The methods include both physical design and a change in processes to allow density to evolve more quickly, commensurate

with market changes. Transaction costs are predicted, then reduced or eliminated. The four methods are:

- ▷ Property infill and building reuse;
- ▷ Construction then deconstruction or relocation of buildings, then replacement with structures at a higher density;
- ▷ Addition of space atop or alongside buildings, or both; and
- ▷ Hybrids of these three methods.

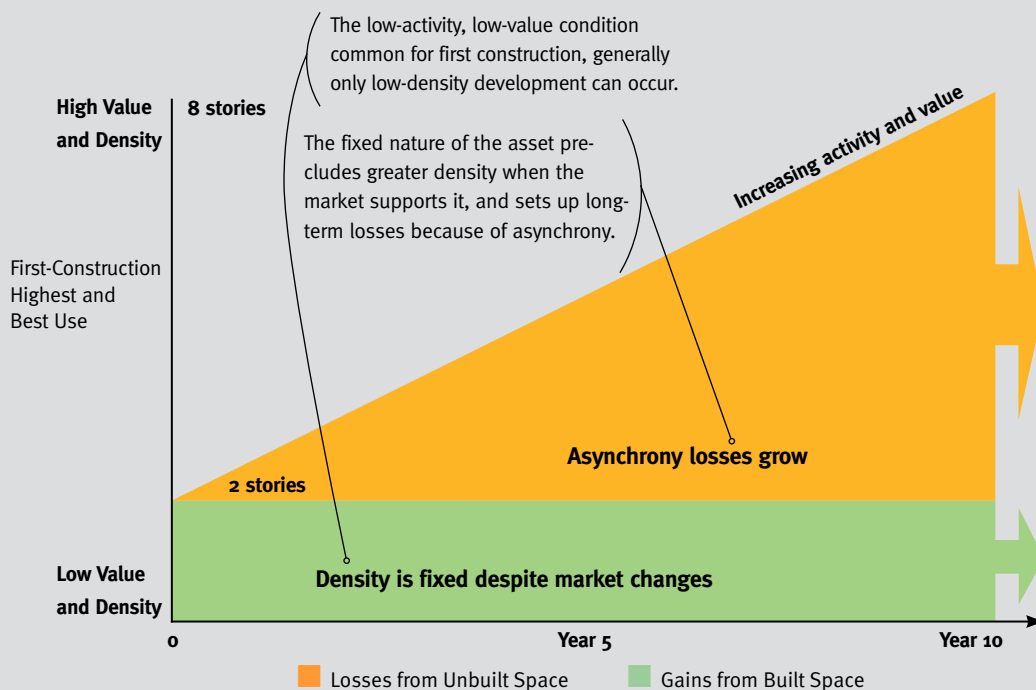
Each method represents different opportunities and constraints that can relate to each project's property size, market, municipality, and other variables. The locally appropriate solution should be determined through a multidisciplinary assessment and implementation process. Each densification method also has precedent, though the methods generally have been applied infrequently and without a whole-system view of stakeholders and how they can contribute to cost-effective densification and benefit from it.

Accommodation of demand locally through densification is an infill pattern that has been lost, especially in the past half century. At the same time, population growth has put unprecedented demand on the country's infrastructure and land use paradigm. Modern, automobile-focused development patterns are low-density first construction without a mechanism to densify key locations, which are limited in number in most communities. (See Figure 2 on page 82.)

The past ten years in the United States has been a period of urban renaissance and infill development, much of it under conditions of low construction costs and exuberant revenues, with sound municipal and agency budgets providing support. But these relationships have changed.

Going forward, a new pro forma will make density less financially feasible in many locations. In addi-

FIGURE 1: ASYNCHRONY LOSSES IN PRIME LOCATIONS WHEN FIRST CONSTRUCTION CONFORMS TO LOW-ACTIVITY, LOW-VALUE MARKET



tion, recent development patterns include more mixed-use projects. Though a desirable product, mixed use without preplanning is less accommodating of change and densification because of multiple ownership and contractual obligations. Demand for real estate within a region can generally be satisfied in a number of locations. If space is

unavailable or too expensive at one site, a building occupant can choose an alternative in the same region. Zoning, community processes, and asynchrony between existing buildings and the surrounding market have been the major obstacles to higher-density growth. Every square foot of space that cannot be provided within existing growth

boundaries creates another square foot of sprawl, often in another town or city. Conversely, every square foot of space built through internal densification decreases the amount of space needed in the form of sprawl. Longer-term, planned densification can also facilitate the agency role in redevelopment. While redevelopment is often a troublesome and expensive

way to realign existing development to meet current market conditions, planned densification can ease the way. (See Figure 3.) Announcing in various formal and informal ways that density is coming helps explain the future of a neighborhood, addresses opposition, and can inform residents where lower-density development will be preserved—which likely will be the majority of the land in municipalities and regions.

Urban development takes place at multiple scales, producing district, metropolitan, national, and, ultimately, global urban systems with a high degree of interdependence. But misalignment of development objectives and approaches at different scales create incoherent growth and a fragile interdependence in the urban realm, which is expected to double in size over the next two decades.

Today, the industrial-scale construction of new urban spaces to provide the form and infrastructure for the movement of goods and people in a globalizing economy often works at cross-purposes with efforts to create local urban vitality and competitive advantage through place-based urban forms that support local economic and social systems and resource production, such as of food. Participants in planned densification are learning how to reconcile these different city-building

FIGURE 2: DENSIFICATION BY CATEGORY

**ORGANIC MARKET RESPONSES TO DEMAND— UNENCUMBERED BY CODES AND RELATED ECONOMIC OBSTACLES**

- ▷ ancient cities, hill towns, nomadic structures
- ▷ shantytowns, less-regulated city examples

**REAL ESTATE—PLANNED DENSIFICATION**

- ▷ mainstream housing development from the 1970s with preplanned room additions
- ▷ shopping center pads
- ▷ parking structure additions
- ▷ master-planned community project infill over time (mostly horizontal, sprawling, to incrementally capture market demand in financially feasible phases)
- ▷ adjunct units and granny flats, both preplanned and under zoning/code changes in existing communities
- ▷ shopping center infill and redevelopment (notably during the 1990s and thereafter)
- ▷ property infill recently introduced into smart growth and, especially, new urbanist projects, which produce high-quality, pedestrian-friendly density

**MARKET-BASED SPONTANEOUS DENSIFICATION**

- ▷ illegal unit additions
- ▷ doubling up of households in existing structures and land capacity
- ▷ doubling up of businesses

**DENSIFICATION WITH HIGH COST**

- ▷ government agency redevelopment, processes, and capital investment, with sociopolitical implications
- ▷ developer-initiated redevelopment with a profit motive, though transaction costs are high; for example, shopping center redevelopment and site infill in the past ten years
- ▷ owner-initiated densification (replacing an old, small single-family dwelling with a bigger home or duplex)
- ▷ miscellaneous building additions (Fox Theatre in San Diego, and those found in New York City and Philadelphia in the mid-1950s, and more recently in Philadelphia and Seattle)

FIGURE 3: HOW DENSIFICATION ISSUES AND TIME ASYNCHRONY LOSSES ACCRUE

	First Construction	Short Term	Medium Term	Long Term
<b>Timescale</b>	Year 0	3 to 8 Years	20-Year Community Plans	20-Plus Years
<b>Key Issues</b>	Feasibility.	Possible changes in market and financial feasibility from recent first construction.	Community plan density relative to longer-term growth needs; not just density, but its location is also key.	Accommodating long-term growth within key locations, facilitating redevelopment, and reducing redevelopment costs.
<b>Problems</b>	First construction is often limited to a low density by low-activity, low-value market conditions in the surrounding market.	Higher-density development will often become feasible, but assets are fixed.	Low-density, long-life assets (40 to 80-plus years) employed in key locations can undermine the ability to accommodate future growth in those locations.	Not planning for densification can encourage sprawl as demand continues beyond 20 years; conversely, some areas will need to contract.

## Making Densification Work

THOUGH DENSITY HAS BECOME politicized as an issue, it is, in fact, in the economic interest of all who seek to build their fortunes in cities. What the development process needs is spaces where the inherent benefits of greater density can be discovered, and where market-viable pathways toward greater economies of density can be created in each local market, as well as in submarkets such as residences, retail businesses, and specialized urban districts.

Preplanning density is the first critical step in defining those pathways. The next step is innovation in business models and process to develop the profit rationale for pursuing densification while eliminating the risk involved.

Like everything in development, this can be a matter of intensive negotiation and collaborative innovation. Success stories in densification—for instance, in King County, Washington; Portland, Oregon; Vancouver, British Columbia; and Curitiba, Brazil—provide examples of how to manage those negotiations. Local authorities and developers in these cities steadily shifted their modus operandi from oppositional control—and from predetermined products and positions—to collaborative design of projects, innovation in business models, and sharing of risk. In these instances, the producer, regulator, and consumer have steadily developed processes to work together to optimize the product, development process, and infrastructure investment for each site, resulting in benefits for all from the increased density.

Companies in the computer, insurance, health, telecommunications, banking, tourism, and retail industries and others increasingly have used consumer data, consumer engagement, user-centered design, and business process innovations to shift from offering fixed products for broad, generic consumer segments toward providing tailored, value-added solutions for differentiated consumer groups, and even for individual consumers.

Through these innovations they have increased production-, inventory-, and sales-cycle efficiencies as well as established strategic competitive advantages. These advances required tightly managed innovation processes and co-creation with consumers and stakeholders.

Likewise, to create a strong market response to the benefits of density, local governments and developers need to establish managed spaces for co-creation that eliminate first-mover risk in tactical—that is, project-specific and development process-specific—efforts at densification. These innovation processes can also play a critical strategic role: when they generate new solutions for establishing economies of density, they also provide vehicles for establishing more robust economic footings in the entire city region.

**JEB BRUGMANN**, founder of the Toronto-based *International Council of Local Environmental Initiatives—Local Governments for Sustainability*, is the author of *Welcome to the Urban Revolution: How Cities Are Changing the World*.

objectives and approaches to create more coherent development outcomes across urban regions.

Planned densification views increasing the density of buildings, sites, blocks, and regions through the disciplines of real estate development, wherein urban design, planning, governance, infrastructure, engineering, finance, and marketing not only converge, but also must correspond under the rubric of feasibility at the time of development. These disciplines introduce numerous time scales and requirements, essentially self-organized for the needs of the various disciplines rather than those of the developer. Each project presents a different set of circumstances, and point-in-time, fragmented-system conditions make optimizing land use difficult in changing markets.

In real estate development, management has much less functional control than is the case in typical industries. Entitlement, equity, and debt capital are examples. Undesirable changes are frequently introduced, desired changes are quashed, and expensive delays are common. These events can threaten an entire project.

Though uncertainty occurs in most industries and organizations, the real estate industry is afflicted by extreme uncertainty and risk, which causes developers to resist change—resistance that is often criticized. The circumstances faced by a developer should be better explained and met with a systemic view of solutions, including the role each stakeholder can play in improving the urban realm—and how each participant must become more supportive of required process change.

An example of how to carry this out can be found in new urbanism, which constitutes a rigorous paradigm with mechanisms in place supporting change. As a community of practice, new urbanism is multidisciplinary, has effective formal and informal communications networks, is collaborative in approach,

assembles cross-functional teams quickly, and understands the transformational power of standards and tools, such as design charrettes; the Transect, an urban planning model created by Andrés Duany; and SmartCode, a transect-based model code.

Initiatives to improve cities—such as smart growth, new urbanism, green building, and socially responsible investment—all suggest changes to real estate's products and processes. But the developer shoulders the responsibility to implement better urbanism by integrating these ideas. Planned densification strives to assist in changing processes by viewing property development and host markets systemically, interdependently, and over time.

The Planned Densification Initiative is a market-based effort that supports policy objectives, giving developers and investors financial motivation to build higher-density projects. It is important to governments that dense development take place in order for them to recapture value that their infrastructure and other investments make possible. Environmental and economic losses in inefficient urban systems are unaffordably large, and they are accruing daily. Regulatory accountability for greenhouse gas emissions might force unprecedented change on development patterns and economics. But if more infrastructure and capital are committed to density-constrained development paradigms, current problems will only get worse in the future. **UL**

**MARK RODMAN SMITH** is founder of Pario Research, which provides urban economic and real estate market research. Planned densification emerged from project and eco-industrial development feasibility research conducted by the firm in the 1990s. Pario Research is in predevelopment on several planned densification projects and is managing the Planned Densification Initiative, which is collecting various densification project experiences for a public database.