Planned Densification

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Planned Densification

- Suburban Retrofit
- Suburban Upgrade
- Planned Retrofit
- Sprawl Repair
- Blight Replacement
- Urban Renewal
- Regenerative Development
Urban Renewal
Blight Replacement

310 Million People (2011) to 438 Million People (2050)

Britney Spears will be 69 in 2050

Where do you put 128 Million People?
Suburban Retrofit
Sprawl Repair
Suburban Upgrade
Regenerative Development
Planned Densification

- Commercial Nurturing
- Asymmetrical Market Response
Interim Use and (almost) Planned Densification: Potomac Yard
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 synchronicity between in-place construction and the surrounding market—and the less occurs. (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, less 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-
Exhibit 1
Asynchrony Losses in Prime Locations When First Construction Conforms to Low Activity, Low Value Market

In a low activity, low value condition, common for first construction, generally only low-density development can occur...

But the fixed nature of the asset precludes greater density when the market supports it, and sets up long-term losses because of asynchrony.

Density is Fixed Though Market Changes

Activity and Value

Year

Gains From Built Space

Losses From Unbuilt Space
Part One

The Problem: Asynchrony
“Markets Change, Buildings Don’t”

Real estate markets can change quickly, but a building’s built capacity and site productivity do not. When a building and its associated land asset cannot change with the market, an out-of-sync condition exists that precludes maximizing economic and environmental performance. Over time the out-of-sync condition, which Planned Densification calls ‘asynchrony,’ becomes chronic, and the chronic asynchrony generates various types of losses. Asynchrony is a problem when trying to maximize land productivity, and economic and environmental performance.
First Construction is Highest & Best Use At That Time

- In many development circumstances, first construction maximizes development potential based upon financial feasibility or highest and best use at that time. But this often occurs at a time when a local market is in a low activity, low value phase of its life cycle—such as in suburban edge areas and the beginning of urban redevelopment.

- Low sales prices or lease rates generally limit construction types to low density, because high density construction is more expensive and not feasible. Once designed, entitled, financed, and occupied, buildings and their obligations have lives of 20 to 80 or more years, a long-term commitment.
First Construction is Usually a Long-Term Commitment

- If a one or two story building is constructed, its economic and environmental characteristics and performance are relatively fixed. See the green area in Exhibit 1.

- Problem is that losses from asynchrony can begin shortly thereafter as the market begins to evolve but the building can’t adjust. Losses grow over time. See the orange area in Exhibit 1.
Exhibit 1
Asynchrony Losses in Prime Locations
When First Construction Conforms to Low Activity, Low Value Market

In a low activity, low value condition, common for first construction, generally only low-density development can occur . . .

But the fixed nature of the asset precludes greater density when the market supports it, and sets up long-term losses because of asynchrony.

Density is Fixed Though Market Changes

Lostes From Unbuilt Space

Gains From Built Space
Look at Low Density Development Around You

Look at existing development in prime locations, such as near transit, an amenity, or other key location. Look at the buildings and consider if they could be larger based upon current market conditions. If the existing development is one or two stories, imagine several more stories of ‘lost opportunity’ on top of the existing buildings, or parcels being in-filled with additional buildings. In essence, look at what is not built instead of what is built. See the orange area in Exhibit 2. This unrealized density is costly, and represents losses.
Exhibit 2

Asynchrony Losses After 5 to 7 Years
When Low Density First Construction Is Placed In Service In Key Locations

High Value & Density

8 Story

Represents Losses as Buildings Could Be This Large...

But They Are Fixed At Low Density

2 Story

Low Value & Density

Key Location After Approximately 5 to 7 years From First Construction

- Orange: Losses From Unbuilt Space
- Light Green: Gains From Built Space
Why Not Just Wait?

In order to construct higher density, developers will often wait until a market evolves towards high activity, high value conditions. Higher revenue associated with the evolved market often permits higher density construction. Depending on the location, amenity, economic cycle, and other factors—it may take three to five or seven years for a neighborhood to gain vitality.
But Waiting is Costly Too

The problem here is that the waiting period is costly, especially when a developer needs revenue to pay loans, investors, and overhead expenses. Municipalities need revenue too. Indeed, the initial development activity is the very provider of placemaking, vitality, and purchasing power that enables higher revenues for higher density development.

A paradox results, in that both developing low density and waiting for high density present losses. The orange area in Exhibit 3 shows the losses of waiting. In this exhibit the green area, representing high density in the future, is shaded to show that even it can be compromised by the wait.
Exhibit 3
Asynchrony Losses
When First Construction is Delayed for Higher Activity, Higher Values

High Value & Density

When first construction is delayed in order to wait for high activity, high value conditions, short-term opportunities for vitality and community building are lost.

Low Value & Density

Of note is that community vitalization is often necessary to get to a high activity, high value market condition. So without some early building activity, feasibility of greater density is jeopardized.

Losses From Unbuilt Space

Gains From Built Space
Solution: Build Low Density Now and Densify When the Market Evolves

The premise that markets change and buildings don’t reflect real estate’s normative condition. Because in certain situations and locations, inflexible buildings generate losses, the solution of planning for densification has been created. The process of planning for and overcoming obstacles to densification is called Planned Densification. In Exhibit 4, both short term and long term development is shaded green, indicating gain and productivity. Asynchrony is a problem, Planned Densification is the solution.
Exhibit 4

Planned Densification Solving for Asynchrony
Enabling Both Short- and Long-Term Benefit

Planned Densification solves the problem of loss from asynchrony . . . so both short-term benefits and long-term benefits are captured for a variety of community stakeholders.
Losses
('Problems' without Planned Densification)

Levels of lost land productivity as market evolves w/o property densification

- Property – loss of value for owner (gap between built density and highest-and-best use)
- Neighborhood – loss of infrastructure ROI for municipality, especially investments like transit
- Neighborhood – loss of vitality to residents & businesses
- Municipality – loss of land productivity overall
- Municipality – loss of economic development potential as businesses must go elsewhere

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Gains
(With the Planned Densification Solution)

- Owner / Developer has more valuable asset
- Municipality realizes higher ROI on infrastructure and has to build less of it
- Neighborhoods become more vital
- Municipality gains economic development opportunity
- Region gains land productivity
Part Two

The Solution: Planned Densification
Summary

Planned Densification™

- Acknowledges mismatch between property and market life cycles
- Allows property to change with market
- Property-specific investment mechanism (not just policy goals)
- Market based
- Adds value, increases ROI, ROE (motivation!)
- Property, neighborhood, regional gains
- Increases environmental performance

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Process of Adding Capacity

- Preplan to Eliminate & Reduce Transaction Costs
- Regulation & Entitlement That Enables PD
- Infrastructure Solutions
- Design @ First Construction and Densification
- Equity and Debt Finance Solutions
- Market, Marketing & Occupancy Solutions
- Actual Densification / Construction

Not just single disciplines, but real estate development’s systemic feasibilities and interdependencies.
Exhibit 5
Property Addition Method of Adding Density
Capacity Change — Planned Densification

First Construction Remains

Densification
Construct, Deconstruct, Reconstruct Method of Adding Density

Capacity Change — Planned Densification

Densification

First Construction Removed
Exhibit 7

Building Additions Method of Adding Density

Capacity Change — Planned Densification

- Densification
- First Construction Remains
Exhibit 8
Hybrid Method of Adding Density
Capacity Change — Planned Densification
Exhibit 9
Four Methods of Adding Density
Capacity Change — Planned Densification

Property Addition

Building Additions

Con- & Decon- & Reconstruct

Hybrid Method
Planned Densification: Mechanics of Sprawl and the Densification Antidote—Increase Asset Value and Reduce Edge Growth

1. The edge's low density economics, zoning, and design contribute to sprawl.

2. Property highest and best use to owner and community rapidly changes as surroundings urbanize... As edge properties quickly become more urban.

3. However, a solution is to instill mechanisms to allow property function to evolve with the urban life cycle, as the market intensifies and construction and operating economics support higher density.

4. RESULT: Thus, we can --
   * Add value to assets for owners and investors
   * Add to return on investment to municipality for community infrastructure and available urban land
   * Reduce need for sprawling edge growth and reduce associated capital and social costs.

* Edge development economics usually mandate low cost, low density construction of assets with 20 to 50 year design, ownership, and finance structures. Thus, the relationship between economics and initial design is a barrier to these assets evolving with the market and reducing sprawl.

* Often, in the short term, the market will support higher density development. However, because the properties cannot readily change function, sub optimal productivity accrues to owners and the community.

* A solution is to plan properties for increased capacity—easily adding square footage and other functions through design, ownership, zoning, and finance tools. Essentially, urban development needs to be viewed as a continuous, connected process to get better productivity, similar to the way an organization would use assets.
Planned Densification℠

Increasing Land Productivity, Urban Capacity, Return on Investment, Return on Assets, and Environmental Performance

“Markets Change, Buildings Don’t. They Could. Some Should”

Planned Densification Understands Coevolution

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Opportunities (beyond water storage, harvesting and treatment)

We help localities make themselves more sustainable.