

Transit-Oriented Development in the United States

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corridors have taken or are beginning to take shape; examples include the Rosslyn-Ballston axis in Arlington County, Virginia, and the Vermont/Western district in Los Angeles's Hollywood area. In addition, over 100 joint development projects today exist on, above, or adjacent to U.S. transit-agency property. The most common joint development arrangements are ground leases and operation-cost sharing. Most often, joint development occurs at rail stations surrounded by a mix of office, commercial, and institutional land uses.

Transit-oriented development (TOD) has attracted interest as a tool for promoting smart growth, leveraging economic development, and catering to shifting market demands and lifestyle preferences. This study, based on a combination of stakeholder survey responses, interviews, and in-depth case studies, paints a national portrait of contemporary TOD practice in the United States.

TOD is viewed and defined differently throughout the country, with its most common traits being compact, mixed-use development near transit facilities and high-quality walking environments. Joint development is a form of TOD that is often project specific, taking

place on, above, or adjacent to transit-agency property. The results of a national survey suggest that the principal aim of TOD and joint development is to boost ridership and, thereby, boost revenue income. Community economic development and broader smart-growth agendas are secondary objectives.

Scope of TOD

A rich mix of TOD can be found across America today, and all indications are that the numbers and types of TOD will grow in years to come. Over 100 TOD projects currently exist in the United States, found overwhelmingly in and around heavy-, light-, and commuter-rail stations. While typically nodal in form, TOD

However, examples of public-private joint ventures can be found among bus-only systems as well, normally in the form of joint intermodal transfer and commercial-retail space at central-city bus terminals.

Institutional Landscapes

Many voices shape the practice of TOD in contemporary urban America. A multi-layered, sometimes complex institutional and political environment has evolved that ensures accountability and instills a degree of responsibility and fairness into the decision-making process, but this environment can also form roadblocks to implementation.

The spectrum of participatory roles transit agencies can take on are

wide-ranging—from roles as modest as providing technical guidance (e.g., transit-supportive design guidelines) to those as ambitious as being the self-anointed lead developer. Most transit agencies get involved in land-use affairs (broadly defined); however, they generally limit their involvement in TOD matters to interagency coordination. Most TOD work concentrates on public outreach and education. A common method for drawing public input into the TOD planning process is organizing design charrettes—ranging from multi-day workshops led by professional designers to facilitated community discussions (inspired by the successes at the Pleasant Hill BART station in the San Francisco Bay Area and along the Wasatch Front under the guidance of Envision Utah).

Local governments wield considerable control over TOD outcomes through zoning ordinances and building codes. Some states, notably California and New Jersey, have sought to jump-start TOD through transit village initiatives that critics view as mere window-dressing since little funding support is provided.

Important recent federal initiatives have been the new joint development ruling (which enables transit agencies to sell land for TOD even if the land was purchased using federal dollars), new starts criteria, and various livable community initiatives. Coordination between public agencies as well as with the private sector normally occurs through various ad hoc task forces and similar forums. In recent years, private developers, builders, and real-estate interests have joined forces to promote TOD in cities like Houston, Charlotte, and San Jose.

The major institutional barriers to TOD are regulatory ones, either a product of restrictive state statutes or self-imposed transit-agency rules.

Some states limit, ipso facto, real-estate transactions undertaken by transit agencies to “transportation uses.” Many transit properties shy away from land development matters on the grounds that it is not central to their mission of delivering safe and efficient transit services. As a result, most transit agencies have no personnel assigned to TOD or, more generally, land development, leaving it to their legal departments to handle land-use affairs and disputes. One in-house rule that has clearly hampered TOD is one-to-one replacement parking requirements.

Nonetheless, over 50 transit stations across the United States are presently being targeted for parking lot conversions, thanks in part to FTA’s new joint development rulings.

TOD Implementation Tools

TOD implementation ideally starts with a vision, cultivated from broad-based public input, and proceeds to strategic station-area planning backed by appropriate zoning as well as policy incentives and regulations. Around half of surveyed transit properties in the United States state that their regions have a vision, policy, or plan in place that embraces TOD principles.

Overlay zones are the most common means of controlling land uses, densities, and site designs of TOD. Overlays, often introduced on an interim basis to head off automobile-oriented uses that might compromise a TOD, usually specify desired land uses as-of-right, such as housing and convenience shops. For urban TODs, densities of 20 to 30 dwelling units per residential acre and FARs of 1.0 and above are not uncommon. Some of the more progressive TOD zoning districts also lower automobile parking requirements and sometimes even set bicycle parking mandates.

The national survey of U.S. transit agencies revealed that besides

standard zoning, the tools most frequently used to leverage TOD are funding for station-area planning and ancillary capital improvements; the introduction of density bonuses, sometimes used to encourage the production of affordable housing units; and relaxation of parking standards. These measures, moreover, received high marks in terms of their overall effectiveness among transit professionals who responded to the survey. Next in the order of frequency of usage have been land-based tools, like land purchases on the open market (for land-banking and potential “deal-making”) and assistance with land assemblage. For the most part, redevelopment agencies have applied these tools, meaning their role in leveraging TOD has been mainly limited to economically depressed or blighted neighborhood settings. Because of the higher risk involved, redevelopment tools have often been accompanied by other funding sources, sometimes with a dozen or more participants involved in the process.

Implementation strategies that are procedural in nature, like expediting entitlement reviews and excluding TODs from concurrency requirements, have been applied less often in practice and are also viewed by public-sector interests as less effective than other measures in jump-starting TOD. This view, however, does not square with that of many TOD developers. In terms of what metropolitan planning organizations, state departments of transportation, and the federal government might do to help implement TODs, respondents from the local levels stated loudly and clearly that what is most needed is money—specifically for strategic station-area planning, infrastructure, and on-the-ground improvements. Smart-growth legislation that targets state infrastructure and urban renewal grants to transit station areas (such as that in Maryland) is also looked upon favorably by local interests.

Regulations like concurrency requirements, on the other hand, generally received low grades among survey respondents from the local level. For financing streetscape and other ancillary improvements around transit stations, monies have mostly come from federal and state grants such as the Transportation and Community System Preservation Pilot Program under the Transportation Equity Act for the 21st Century (TEA-21). The most common sources of non-grant funds used to leverage TOD are individual investor funds and nonprofit/foundation funds.

Building and Bankrolling TOD

Ultimately, TOD is an outcome of one or more developers putting up

elements was parking. On the one hand, many developers relate to the idea that parking standards should be lowered to the degree that significant numbers of residents, shoppers, and workers ride transit. On the other hand, many have embraced the principle that parking is an effective marketing tool and can sometimes make or break a project. Regardless, most favor leaving the decision of how much parking to provide to the private sector. Developers feel that they know the market best and will take advantage of cost savings when justified.

On balance, many developers feel that locating projects near major transit stops is advantageous to the degree it provides rent premiums.

developers embrace TOD as a concept; however, there is a general agreement that TOD offers little help when it comes to securing conventional debt financing. Loan decisions, they note, are governed by fundamentals, not urban planning concepts. Interviewed lenders echoed this sentiment.

Most of the interviewed lenders had difficulty pinpointing the positive and negative factors that influence whether they invest in a TOD because banks, they contend, look at each project on its individual merits. Dealing with the innate market characteristics of TOD— notably, mixed-use projects with the advantage of being near transit—is generally viewed as the best way to market the TOD product to the lending community. Factors that enhance the connection of a parcel to a rail station— direct and attractive pathways, welllighted and secure portals, and a strong degree of public commitment backed by infrastructure improvements like undergrounding utilities and upgrading road access—are likely to make TODs all the more attractive to lending institutions.

Interviews suggest that joint development projects are more difficult to finance than neighborhood-scale TODs. This is partly due to guilt by association—the fact that a project is directly tied, symbolically and figuratively, to a transit facility seems to detract from its value. The bureaucratic component of joint development projects, involving government institutions that are not always driven by the profit motive, makes some lenders uneasy as well.

TOD Barriers

Many roadblocks stand in the way of TOD, just as they do with most forms of compact, mixed-use development. Some barriers are fiscal in nature, such as the higher costs and risks of dense, infill development; the alignment of rail lines along low-cost corridors that

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their money, or the money of lenders and investors, to create a new form of urbanism around transit stations. Interviews revealed that developers view TOD in mostly positive terms. When asked to rate the overall financial record of TOD, interviewed developers on average gave it a 5 on a scale of 1 to 7, indicating that they think it performs better than most products.

Developers were especially optimistic about TOD's prospects in areas where traffic congestion continues to worsen and there is a pro-TOD political sentiment. While there were substantial areas of agreement among developers who were interviewed, a number held conflicting views of certain elements of TOD. One of these

Some also feel that locating projects close to transit can improve the ability to secure equity finance, particularly for certain product types in pioneering locations (e.g., office development in suburban locations). Most developers realize that more is needed than spatial proximity, however. Making sure that the walk between a project and a station portal is safe and reasonably attractive matters to many. Putting in complementary land uses, such as convenience shops and service retailers, is particularly important to TOD homebuilders.

Nonetheless, developers realize that regardless of what they think, access to funds is often dependent upon the views of lenders. Many

have minimal development potential; and fiscal/exclusionary zoning policies that restrict housing production. Others are in the form of political roadblocks, like “not-in-my-backyard” (NIMBY) opposition to infill. Still others are institutional and organization in character, such as the difficulty of coordinating TOD activities among multiple actors and stakeholder groups with divergent interests.

While many of these barriers are generic to all forms of dense, infill development, some are more often associated with TODs. One of these barriers is the “congestion conundrum”: the fact that nodal development around a transit station increases spot congestion, prompting some jurisdictions to downzone.

Another barrier is the logistical dilemma of accommodating multi-modal access needs, which often

results in station road designs and parking layouts that detract from the quality of walking. More fundamentally, this represents a conflict between the role of a station as a functional “node” (particularly in the minds of transit managers) and a desirable “place” (particularly in the minds of urban planners). Still another stumbling block unique to TODs is the rationalization of parking. By their very nature, transit stations offer “location efficiency,” enabling residents to get by with fewer automobiles than they might otherwise own. Despite transit stations’ inherent location efficiency, lenders and planners often insist that code-standard parking be provided in station areas. (One mediating approach is to unbundle the price of housing and parking, creating separate markets for each.) Within transit station boundaries, clashes are also found between the preferences of

professional-class suburbanites who park and ride and other groups who would prefer more human-scale station designs. Many transit officials side with automobile-using patrons, invoking one-to-one replacement policies to ensure that parking is in ample supply.

Lastly, mixed land uses, which are a characteristic trait of TODs, pose difficulties in lining up funding, investors, and contractors. Vertical mixing is particularly problematic; most developers call for horizontal mixing instead. Quite often, the ground-level retail components of mixed-use TODs suffer the most, in part because they are poorly laid out.

The national survey of public-sector stakeholders shed light on what barriers are perceived to be the most onerous and difficult to overcome. Most problematic,

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according to survey respondents, are automobile-oriented development patterns. The lack of lender and developer interest in TOD, limited local expertise in planning for TOD, and questionable market demand are also generally seen as significant stumbling blocks. Factors like NIMBY opposition, inadequate transit services, and poor siting of transit stations were generally rated as moderate barriers. While the developers interviewed for this study were enthusiastic about TOD, their views on what is “transit-oriented” did not always square with urban design principles that call for mixed-use buildings clustered in close proximity to a transit station. Notably, a handful of developers felt strongly that TOD design guidelines should not overemphasize vertically mixed uses such as groundfloor retail and

upper-level residential. They explained that outside of dense urban locations, building mixed-use products in today’s marketplace can be a complex and risky proposition; few believe that being near a train station fundamentally changes this market reality. Those interviewed did welcome certain public-sector efforts to create incentives for development, including land assembly, infrastructure provision, strategic investments to improve neighborhood image, and expedited development review processes. In general, developers cautioned against over-regulation and identified actions that could be taken well in advance of development that would reduce risks and encourage more TOD.

The Benefits of TOD

The potential benefits of TOD are

social, environmental, and fiscal. Focusing growth around transit stations capitalizes on expensive public investments in transit by producing local and regional benefits. TOD, proponents believe, can be an effective tool in curbing sprawl, reducing traffic congestion, and expanding housing choices. The most direct benefit of TOD is increased ridership and the associated revenue gains. Research shows residents living near stations are five to six times more likely to commute via transit than are other residents in a region. Other primary benefits include the revitalization of declining neighborhoods, financial gains for joint development opportunities, increases in the supply of affordable housing, and profits to those who own land and businesses near transit stops.

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TOD's secondary benefits include congestion relief, land conservation, reduced outlays for roads, and improved safety for pedestrians and cyclists. Many of these benefits feed off of each other, and quite a few are redistributive in nature—gains experienced by some are matched by losses experienced by others.

The impacts of TOD no doubt vary by time and circumstances. In a boom economy, when highways are jam-packed, the benefits of living, working, and running a business near a grade-separated, high-performance transit line are likely much greater than during an economic downturn. TOD is also likely to be more highly valued in large congested cities than in small, un-congested ones. It is because of such variation that our knowledge of TOD benefits remains partial. Such variation has also given rise to harsh debates and conflicting signals on TODs benefits, especially in “best case” settings like Portland,

Oregon. Those working for transit agencies and local, regional, and state governments generally give TOD a moderate rating in terms of its ability to produce benefits.

TOD gets high marks for contributing to neighborhood and housing conditions. Its greatest benefit, according to national survey respondents, lies in increasing ridership. In light of the premium placed on TOD's ridership-boosting potential, this study carried out original research that examined the association between development patterns around rail stations and transit usage in two regions of the country with among the most successful TOD track records: the San Francisco Bay Area and the Washington (D.C.) Metropolitan Area. For the Bay Area, census data from 2000 and geographic information system tools were used to build statistical models that showed transit commute shares increase with density, land-use diversity, and pedestrian-oriented

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