

Identifying TOD-Capable Locations using D Variables: Flipping the Recipe on making the TOD Cake

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Project Partners: Denver Regional Council of Governments (DRCOG); Regional Transportation District (RTD); City of Denver's Department of Transportation and Infrastructure (DOTI)

Project Funding: \$60,000 (USDOT) + \$30,000 (matching funds) = \$90,000

Project Start and End Date: 10/01/2024 to 5/31/2026

Project Description: The transportation-land use field has argued for transit-oriented developments (TODs) due to several benefits such as reduced driving and potential use of travel options with positive health outcomes. However, locations with features that align with TODs are generally undersupplied. In the U.S. context, the production of TODs has been relatively rare. With the intersecting crises of unaffordability and demographic shifts in the U.S. population, there is a need for effective mechanisms to help enable the production of mixed-use communities embedded in active travel and transit networks. Most often, a top-down regulatory process including zoning plus comprehensive or special plans are used to help TODs emerge. Additionally, local government actions are incentivized by private market forces such as real-estate developers who identify markets for TOD-aligned communities. However, these processes are reactionary, while the need is more urgent. Therefore, we argue for flipping this time-consuming and expensive top-down recipe. We contend that using the D variables, documented in the EPA Smart Location Database (US EPA, 2021), can reveal locations that have the ingredients for making TOD-capable, mixed-use places. Our approach should be especially impactful in communities that are focused on creating livable and vibrant neighborhoods. Over time, land use markets evolve to an equilibrium such that some locations become TOD-lite under an existing umbrella of zoning regulations; however, most places even in the same geography do not mature into mixed-use sustainable developments. A deeper investigation could help identify organically emerging TOD-capable locations. Places with a sub-set of features for a TOD could be incentivized to develop into more TOD-aligned locations. In terms of the policy toolkit, a census block group (CBG) with several of the D variables showing high values but missing some key ingredients such as destination accessibility or distance to transit, could be places for strategic transit and active travel investments. Many CBGs might have lower density and diversity but might score high on other D variables. Such locations could be incentivized through mixed use and infill development, without changing anything else on the D-variable ingredient list. In essence, we contend that practitioners need a toolkit to identify sub-markets for transit capable, affordable, mixed-use developments, which must evolve in an urban setting but are often ignored because they do not rise to the level of

comprehensive or special plans. Our project will create a toolkit to help identify such TOD-capable locations.

USDOT Priorities: *Transformation:* This project will develop a framework and a publicly available toolkit for identifying locations with the possibility for systematic investments so that transformative solutions, validated by expert practitioners in agencies, can be showcased for modernizing neighborhoods through transportation best-practices, new technologies, and innovative policies in place making.

Outputs: 1. A practice-ready toolkit to identify TOD-capable locations, at the CBG level, across large Metropolitan Statistical Areas. 2. A replicable framework to engage expert practitioners in local/regional agencies for gathering input for effective TOD implementation. 3. An open-source publicly accessible web app that allows various stakeholders to learn and implement similar ideas in various geographies. 4. A public-facing technical report documenting the research approach, method, and findings. 5. At least one conference presentation and journal manuscript for a scientific audience.

Outcomes/Impacts: 1) Present lessons from the literature and best practices around the D variables to government/agency expert practitioners. 2) Using the co-produced framework, generate a replicable and cost-effective toolkit to identify locations, at the CBG level, that are most likely to have some (if not all) TOD ingredients. 3) Challenge conventional thinking about TOD production, using the stakeholder framework and toolkit, to create typologies of TOD-capable locations. 4) Affect the production of TOD-capable locations through creating a framework to link funding sources such as S/TIP RFPs with likely transportation investments.

Final Research Report: (Link to be provided after project completion).