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CENTER FOR INNOVATIVE FINANCE SUPPORT

The Value Capture Quick-Start Guide

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Introduction

This quick start guide, in conjunction with the value capture toolkit, is a concise reference guide and a collection of resources to help policy makers and private entities explore value capture as a finance mechanism for transportation projects and programs. The guide covers what value capture is, the different forms it can take, resources needed to implement, and lessons learned from small county and municipal applications to larger statewide programs. This quick start guide will provide wayfinding for individuals and organizations with little or no experience with value capture and still provide resources helpful to practitioners with experience using value capture.

What is Value Capture?

Value capture offers an equitable means of recouping value from the private sector in proportion to the benefit received from transportation improvements. Applied correctly, value capture is narrow and targeted. It is generally not only palatable to, but often supported by, private property owners because they receive a direct and tangible benefit from their investment. Recapturing and reinvesting value back into the transportation system maintains and even enhances the value of local private land.

Value capture presents the opportunity to fund infrastructure in a more equitable way, and to align infrastructure provision with a wide range of public policy needs such as smart growth, affordable housing, and environmental protection. This occurs in part because value capture is really composed of three elements: value creation, value capture, and value expenditure. Public infrastructure investments create value, a portion of that value created is in private gains, and a portion of that value can be captured for existing or future infrastructure expenses. Successful value capture implementation considers the potential market response to all three components:

1. **Value creation:** How much value does the transportation infrastructure create and for whom?

2. **Value capture:** How can that value be captured in a way that maximizes equity and minimizes unintended market responses (negative externalities and market distortions)?

3. **Value expenditure:** How can value created by public investment be allocated to support public benefits?

Value capture techniques have the potential to close funding gaps for critical infrastructure and align those investments with other local and regional public policy goals. Value capture is not a magic bullet or a one-size-fits-all financing solution, but when implemented well, these techniques ensure that infrastructure investments reflect the true cost of infrastructure and land development patterns and promote taxpayer equity and fairness.[1]

[1] User fees capture value from system users, and general taxes spread the cost of an infrastructure investment across all taxpayers regardless of how much they use or benefit from that infrastructure. User fees and general

Why Use Value Capture Techniques?

Traditional funding sources, including the Highway Trust Fund, are inadequate to meet the funding needs for capacity improvements and to fix deteriorating infrastructure conditions. Estimates suggest that there is an investment gap of more than $8.2 trillion that are needed by 2039 for transportation in the US. If the investment gap is not addressed, the economy is expected to lose more than $10.3 trillion cumulatively in GDP by 2039.[2] Sustained investment is thus required to address the need for infrastructure improvements to mitigate congestion, improve highway pavement conditions, maintain bridges, improve safety, retain economic competitiveness, and focus on new transportation issues. Capacity and condition challenges that highway and road systems face include:

- Severe or extreme traffic congestion impacts. 30% of trips on roadways nationally, while 47% of urban Interstate s face congestion during peak trip hours.[3]
- 43% of US roads are in poor or mediocre condition, most of which are on rural and urban collectors and not the Interstate system. By 2040, higher temperatures and severe weather events will add an estimated $19 billion to pavement costs annually.
- 46,000 bridges are in poor condition and 42% (259,000 bridges) are at least 50 years old.
- The estimated backlog of road and bridge capital needs is around $786 billion.
- Pedestrian deaths on US roads have increased 60% over a ten-year period, with over 6,000 deaths in 2019, illustrating the need for continued safety improvements.

Value capture is a set of innovative finance tools and techniques that can close State and local funding gaps or accelerate delivery for critical infrastructure and align those investments with other local and regional public policy goals. Value capture techniques enable flexibility to fund at the individual project level, groups of projects, or infrastructure programs. Funding can be used to fill gaps, accelerate projects, provide local matches, or be directed to uses that other Federal or State funding sources cannot be applied to.[4] In practice, value capture can:

Finance public investment in infrastructure to reduce physical vulnerabilities due to floods and damage by other severe weather events.

Secure (or reimburse) upfront infrastructure funding by recouping real estate value gains generated by public sector infrastructure improvements. Capture “windfall gains” that would otherwise accrue to a small number of individuals because of public infrastructure improvements.

- Promote infrastructure cost-sharing with win-win outcomes to public and private stakeholders; and

taxes do not capture a fair share of the concentrated benefits that accrue to property owners, developers, and businesses served by the infrastructure.

[2] American Society of Civil Engineers, 2021 Report Card for America’s Infrastructure, https://infrastructurereportcard.org/.

[3] Ibid.

[4] For example, Pasco County did this with their multimodal mobility fee program, see https://www.fhwa.dot.gov/ipd/pdfs/value_capture/case_studies/pasco_county_fl_multimodal_mobility_fee.pdf.

- Incentivize wider policy measures that increase land value, e.g., reduction of local risks.

Whether the need is at the neighborhood, district, municipal, county, or State level, there are value capture techniques available for most applications. Depending on the technique, value capture can accommodate funding needs ranging from hundreds of thousands to billions of dollars over time. The business case and design of the value capture implementation requires careful consideration of the needs, benefits of the project(s) or programs, and value the infrastructure will create. Lastly, value capture techniques can be implemented for a short period of time or long-term depending upon the transportation infrastructure needs of the State or community.

Local Implementation Needs and Resources

While this quick start guide will provide guidance on some of the key steps needed to implement value capture, the high-level needs and processes are the same as other funding pursuits. The four major local needs are defined in Table 1. Depending on the agencies or departments involved, these skills and needs can come from internal resources or external partners.

Table 1: Local Implementation Needs and Resources

Implementation Needs	Description of Local Needs and Resources
Legal support	Legal counsel familiar with land use law and with experience in municipal finance are advantageous to definitively identify available value capture techniques that can be used locally. Legal counsel will be able to evaluate proposed value capture implementations to ensure they satisfy statutory requirements. Legal counsel will be able to establish the legal basis, precedent, and supporting evidence to avoid potential legal challenges or invalidation.
Strong finance and property assessing services	Value capture will require revenue collection, property value assessment, and accounting staff support and systems from jurisdictional offices covering finance, auditing, and assessments. These staff and resources are needed during exploration, implementation, and operations phases of any value capture pursuit. These skills will be important to determine the appropriate techniques and financial instruments required to generate needed revenue.
Strong public engagement and political support	Support from the public, policy makers, and local politicians can expedite implementation and maintain use of value capture in the future. Clear messaging on the benefits (including equity), transparency on where and how funds will be spent, and where value is extracted from are important aspects of outreach and education. Cross neighborhood or jurisdictional projects will require support from multiple communities and leadership. Close political ties across communities are essential for any cross jurisdictional projects.
Motivation and the business case	Make the business case by communicating the value the proposed infrastructure creates and the benefits of funding it through value capture - to stakeholders who will now be asked to contribute a fair share. Articulating the benefits and economic development potential can be key motivating factors to generate or maintain support.

Examples of Successful Value Capture Implementations

The following summaries of successful value capture implementations were drawn from a larger selection of more in-depth case studies that can be found on FHWA's Center for Finance Support's Value Capture Case Studies website.[5]

N STREET BIKEWAY—COMPLETE STREETS PROJECT WITH A SIZEABLE FUNDING GAP

The city of Lincoln, Nebraska wanted to connect its extensive 128-mile bicycle train network to and through its growing downtown to solve the downtown's "last mile problem" that had left it disconnected. In order to meet the final project cost of $3.7 million, the city assembled a comprehensive funding package from over 20 different sources, including a significant share from four TIF districts. The TIF districts were crucial in closing the funding gap to enable the project, providing nearly half of the total funding. Since the completion of the N Street Protected Bikeway in 2016, over $165 million in private development has occurred in the downtown area, including the development of over 500 new residential units. The project has also motivated further support for active transportation in Downtown Lincoln and promoted the development of more bike lanes.

YANKTON COUNTY SERVICE ROAD—RURAL ECONOMIC DEVELOPMENT

Yankton County, South Dakota in partnership with a private developer, wanted to update a gravel road to a concrete industrial access road to connect the site of a future rail-served industrial park with necessary access to the highway. The project did not meet the criteria to receive Federal funding, so the county received a low-interest loan through the State DOT infrastructure loan program to fund the project and established a TIF district to make debt service repayments. The completion of the service road and related infrastructure supported the development of a $40 million high-speed grain receiving facility that employs 10 full-time equivalent employees along with other sites available for development, furthering the county's economic development goals.

PASCO COUNTY—IMPACT FEES WITH MITIGATION MEASURES

Pasco County, Florida had a variety of key transportation-related goals that they needed to fund, including mobility infrastructure improvements, reduction of sprawl to rural areas, and promotion of economic development. The county developed the Multi-modal mobility fee program (an impact fee) as a one-time capital charge to recover the proportionate cost of transportation improvements needed to serve the demand generated by new development projects. The Multimodal Mobility Fee Program has proved particularly successful due to its being tailored to the county's land use goals of smart growth, allowing the county to satisfy Florida's growth management objectives of reducing sprawl. The program is expected to generate $627 million in revenues between 2025-2045.

TEXAS TRZS—OVERLAY DISTRICTS AND DEVELOPER FEES

El Paso, Texas was facing a large financing gap to fund important transportation improvements. To fill this gap, the Camino Real Regional Mobility Authority developed two transportation

[5] FHWA's Center for Finance Support's Value Capture Case Studies website, https://www.fhwa.dot.gov/ipd/value_capture/case_studies/.

reinvestment zones (TRZs) in El Paso, Texas to fund transportation improvements. One notable improvement is the Americas Interchange, which is a significant crossroads between the United States and Mexico. The implementation of TRZs in El Paso filled a $70 million financing gap for large transportation infrastructure improvements.

MARICOPA COUNTY SALES TAX DISTRICT—AN URBAN, MULTI-JURISDICTIONAL LARGE-SCALE PROJECT

The Loop 202 South Mountain Freeway project in the Phoenix metropolitan area, the largest single project in Arizona history, faced a local funding gap despite receiving Federal funds. Maricopa County established a countywide sales tax district that imposes a half-cent tax on retail sales in order to close the funding gap and provide further funding for other transportation projects in the Maricopa Association of Governments Regional Transportation Plan. The sales tax was the largest source of funding for the Loop 202 project, covering 38% ($702 million) of the total project cost. The project, which provides important connections and alleviates traffic congestion in downtown Phoenix, would not have been financed absent the value capture technique.

The Value Capture Techniques section of this Quick Start Guide presents more examples of how the techniques have been implemented across the country.

What Is Included in this Value Capture Quick Start Guide?

Value capture is not a new revenue or financing concept, and some techniques are called by different names in different places. The technique has been widely used in transit projects and as this guide will show, is applicable to highway and roadway projects. Value capture is a flexible funding opportunity for State and local agencies. This guide will describe the techniques, their requirements, and applications. It will also provide examples of successful implementations and direct readers to key resources.

Legal

Value capture techniques require local legal authority to collect revenues. Each technique may require State enabling legislation. However, in the broadest sense any value capture technique must meet the following basic legal requirements:

- Uniformity where the same tax or policy applies equally to every subject (person, business, or thing) in the same situation[6];
- Avoid challenges pursuant to "takings" under the Fifth and Fourteenth Amendments to the U.S. Constitution; and
- Adhere to State and local laws and requirements including but not limited to how districts and zones are defined, the placement and location of sponsorship signage, uses of funds, and revenue collection.

Uniformity could be an area of concern as taxes or fees should be applied equally and value capture can give the appearance of treating some properties or taxpayers differently from others. Value capture is used when infrastructure investment is likely to produce benefits that are distributed unequally, resulting in much greater benefits for certain individuals or groups than others. In these cases, it is fairer and more efficient to have these beneficiaries contribute a share of cost proportional to their share of benefits than to have all taxpayers subsidize them. If the amount collected through value capture can be demonstrated to be proportional to benefits received, it will typically meet the legal standard of uniformity as well as takings. Another way to meet uniformity is to demonstrate that the money collected through value capture returns publicly created land values to the community ("land value return") and is one approach for charging beneficiaries for the special benefits they receive.

There are three critical tests that an implementation must pass to avoid legal challenges from violations of uniformity or as takings under the Fifth and Fourteenth Amendments: "essential nexus", "rough proportionality", and "but-for" tests (Table 2). These tests can and should be applied together to determine: (1) if there is an established relationship between the infrastructure and the development, (2) if the value capture is proportional to the impact, and (3) will development occur without the infrastructure improvement.

Legal research, following local examples, and analysis of proposed value capture implementations and uses of funds are important to remain in compliance with local requirements. Additional legal information for the basis of these tests can be found here: "Essential Nexus, Rough Proportionality, and But-For Tests: State of the Practice" report.[7]

[6] Legal Information Institute, "Uniformity Requirement." https://www.law.cornell.edu/constitutionconan/article-1/section-8/clause-1/uniformity-requirement.

[7] "Essential Nexus, Rough Proportionality, and But-For Tests: State of the Practice." https://www.fhwa.dot.gov/ipd/pdfs/value_capture/rational_nexus_and_but_for_study_state_of_the_practice_report_final_05122021.pdf

Table 2: Legal Tests for Value Capture

Legal Test	Description
Essential Nexus	For any type of exaction or special assessment, a nexus, or relationship between the development and the infrastructure must be established. This nexus test provides the assessing jurisdiction the validity to use these value capture techniques through demonstrating the benefits the infrastructure provides to private developments.
Rough Proportionality	Private development has impacts on infrastructure and can be required to remediate or mitigate those impacts. To be equitable, the burden should be "roughly proportional" to the impact being mitigated.
But-for	The but-for test establishes the case that: (a) the proposed infrastructure project is necessary to generate increased economic activity and tax revenues for the district; and (b) the economic development would not occur in this location without the project.

Value Capture Techniques

Types of Value Capture Techniques

There are a wide range of value capture techniques available. Some techniques are better suited for certain applications or geographies. The list below in Table 3, organized by funding strategy, describes the major categories and techniques available. Subsequent sections of this quick start guide provide information and guidance on how to select the best options for your funding needs.

Table 3: Value Capture Techniques Organized by Funding Strategy

Strategies	Mechanism or Technique Included	Funding/ Can Support Financing	Fee Collection: Upfront or Ongoing
Cost Sharing Strategies: growth paid for growth	• Developer Voluntary Contribution • Transportation Impact Fees/ Mobility Fees/Multimodal Fees • Negotiated exaction	Funding, Financing	Upfront/One-time payment for each development. May require time for funds to grow based on development pace.
Maintenance, Correcting Deficiency, Preservation	Transportation Utility Fees, Road Maintenance Fees	Funding, Financing	On-going fee collection.
Cost Recovery (Special Fees and Taxes)	• Special Assessment District • Community Improvement District/ Business Improvement District • Land Value Tax	Funding, Back-up Debt Pledge	On-going fee collection and/or taxes.
Economic Growth, Attract Development, Job Creation	• Tax Increment Financing (TIF)/Tax Increment Reinvestment Zone (TIRZ)/Transportation Reinvestment Zones (TRZ) • Sales Tax Increment District	Funding, Financing	On-going for a predetermined time period (sometimes renewable).
Joint Development, Mixed Use Development	• At-Grade Right-of Way (ROW) Agreement • Above-Grade ROW Agreement/Air Right Development • Below-Grade ROW Agreement/ Utility Joint Development	Funding	Ongoing. As agreements take time and coordination, growth in funding is slow and incremental.
Recycle the Value of the Existing Infrastructure Assets	Asset Recycling	Funding	Upfront or ongoing depending upon how the agreements are made. Agreements can be long-term and transferable.
Offset Operating & Maintenance Expenses	• Naming Rights • Sponsorships/Advertisings	Funding	Upfront or ongoing depending upon agreements with sponsors.

Considerations for Implementing Value Capture

With careful upfront planning, research, and stakeholder engagement, value capture implementation can be straightforward. The initial questions and processes that must be considered while pursing value capture are:

- Is this intended to generate revenue for program, single project, or group of projects?
- Will this revenue stream need to be sustained?
- Will value capture have political and stakeholder support?
- Is there enabling legislation to support this?
- Which technique is best suited to the revenue needs?
- Does the managing agency have or can acquire the resources needed to implement?

In addition to the general funding considerations listed above, any successful value capture proposal will also need to consider the public and private sector perspectives to ensure it has stakeholder support. Also, to be considered is whether economic conditions will support the proposed technique. When evaluating the interaction between economic conditions and a given value capture technique, the important factors are: (1) Does the value capture technique change the amount of development that will occur (and is this the desired result?), and (2) Who bears the cost of the value capture, landowners, and developers? Or consumers, in the form of increased property rents and sale prices?

The following section describes the requirements, challenges, and opportunities for each value capture technique.

Common Value Capture Techniques

IMPACT FEES

Revenue basis: Future development

Overview: Developers are assessed cash charge to compensate the cost of area-wide infrastructure upgrades made necessary by new development. It is a one-time charge applied routinely by a local jurisdiction to proposed real estate development projects in the area benefitting from infrastructure upgrades. Impact fee revenues pay for a portion of the cost of facilities upgrades. Impact fees are assessed using formulas that consider benefit allocation, intensity of land use, distance to the upgraded infrastructure, and other factors related to benefits received and impacts.

Key Requirements: (1) State and local level enabling legislation; (2) Strong planning and analytical capacity at local level is necessary to determine infrastructure needs, costs, and allocation of benefits across different locations or projects; (3) Strong capital planning element and execution of public investment plans; (4) A transparent, consistent formula for impact fee calculation, allowing developers to reasonably estimate impact fees in development financial pro forma.

Challenges: Impact fees can hinder or slow development activity as it increases the cost of development. It may become a disincentive to develop land to its highest and best use. It can be

applied incorrectly if infrastructure benefits are distributed unevenly, or there are imperfections in apportioning off-site costs. May not be suitable for infrastructure items where short-term impacts are less tangible and more difficult to value or monetize (e.g., resilience enhancement, "green" infrastructure). Significant institutional capacity is required to design, implement, and charge impact fees. A robust nexus study helps defend the fees from legal challenges.

Opportunities: Relatively straightforward two-way transaction with minimal negative fiscal impacts. Efficient tool to allocate costs of development-enabling infrastructure, which avoids overburdening of first comers and free-riding of followers. Works best for hard and basic infrastructure that has direct and quantifiable impact, such as transit, sewer, or water upgrades.

Example: The Regional Transportation Commission (RTC) of Washoe County, Nevada utilizes impact fees as a value capture mechanism through the Regional Road Impact Fee Program. The program, implemented in 1995, is used to fund and construct transportation improvements featured in the Capital Improvement Plans in two service areas within the county. The impact fees are calculated based on expected travel growth as measured in vehicle miles traveled, expected change in housing and employment, and land use category for future developments. The program has generated $300 million toward funding capacity improvement projects necessitated by growth in developments in the region.

NEGOTIATED EXACTION

Revenue basis: Future development

Overview*:* In-kind (land, improvement) or cash contribution by a developer to foster infrastructure upgrades related to a proposed real estate project. Exactions are similar in principle to Impact Fees but are not schedule-based. Exactions are often used to pay for infrastructure made necessary by zoning changes (higher land use, density, or eased construction norms) or other forms of development-enabling certifications. In contrast to Impact Fees, that are applied systemwide on a formula basis, exactions are typically determined on a case by case through a negotiated transaction.

Key Requirements: (1) Clear land use, zoning, city planning regulations and construction norms to establish baseline conditions. (2) Local government capacity in planning and implementation to be able to fulfill infrastructure obligations. (3) Well-defined approval and public outreach processes to explain the permitting processes and zoning variances which can be traded for exactions to fund infrastructure to accommodate future growth.

Challenges: When exactions are negotiated on a case-by-case basis, impacts to private sector development decisions are less predictable. Granting zoning variances for exactions may fail to generate enough public good outside of a project itself if highly localized or if the project scale is small. Exactions are highly variable in nature due to market conditions and are often one-time or short-term investments. This results in a revenue stream that can be unpredictable, or largely in the form of land or right-of-way acquisition, and likely unsuited as a capital funding source.

Opportunities: Straightforward two-way transaction, minimal fiscal impact, minimum framework regulatory arrangements needed, and transactions can be fully structured with ad hoc deal terms.

Example: The City of Chesapeake, Virginia uses negotiated exactions—called "proffers" in Virginia—to fund infrastructure that meets the transportation needs of new development in

rapidly growing areas. Proffer has been formally enabled by Virginia law since 1973 and is practiced whereby developers extend an offer of value - often in the form of land, cash, or agreement to adhere to design standards - to a jurisdiction in exchange for approval of a rezoning for development. Virginia's proffer system is enabled by State-level conditional zoning, which allows "reasonable conditions governing the use of such property, such conditions being in addition to, or modification or the regulations provided for a particular zoning district or zone by the overall zoning ordinance."[8] The City of Chesapeake is using proffered right of way and cash contributions from developers of new residential developments along Elbow road to fund a widening project that addresses the incremental traffic impacts of these developments. Developments along Elbow Road have contributed $500,000 cash for the widening project, reserved more than 11 acres or right-of-way for the future four-lane Southeast Expressway, and constructed some portions of the widening.

LAND VALUE TAX

Revenue basis: Current and future land values

Overview: This tax instrument assesses value of unimproved land separately from buildings and structures, in contrast to conventional property tax which taxes the value of land and improvements together. This approach aims to differentiate tax burden to landowners based on "windfall" benefits of unimproved land—location, physical characteristics, and neighboring uses. It incentivizes improvement of underused urban sites by making idle land and land speculation in prime locations a burdensome option for landowners.

Key Requirements: (1) Robust land cadaster, land assessment and regular reassessment practice; (2) Effective tax administration capacity at the local level; and (3) Strong local real estate market that naturally differentiates values of undeveloped land based purely on location quality and development potential.

Challenges: Separating or accounting for land value increases the complexities of tax administration. It requires technical capacity at the municipal level for maintaining a more detailed property tax database and land reassessment systems. To better target valuable urban properties and avoid applying the tax to outlying areas (which would encourage development in those areas), taxation powers may need to be devolved from the county level to municipalities.

Opportunities: Incentivizes development of unimproved or underutilized land in prime urban locations, or it can be an effective tool to spur revitalization in areas affected by natural hazards. Jurisdictions can leverage property tax assessment systems already in place, and if adequately structured and implemented it can increase tax revenue providing additional funds for public works.

Example: The City of Altoona, Pennsylvania adopted the land value tax in 2002 as part of a broader strategy to diversify the local economy. The land value tax, to which the city transitioned from taxing buildings, was originally designed to function as an incentive for owners of vacant land to develop on their parcels or sell. It was also designed to incentivize owners of residential and commercial properties to make improvements to the buildings without concern of getting taxed. Land value assessments in the city are currently based on frontage and location.

[8] "Virginia's Proffer System and the Proffer Reform Act of 2016," Edward A. Mullen and Michael A. Banzahf, Richmond Public Interest Law Review (Vol. 20:3, Article 3, page 3).

Altoona, the only municipality in the U.S. to rely solely on land value taxes, has experienced notable increases in median income, land values, and property values since the implementation of the land value tax, however, it is unclear if these are a direct effect of the tax.[9]

SPECIAL ASSESSMENT DISTRICT

Revenue Basis: Current and future property Values; for Community Improvement District, revenue is based on current and future sales or other revenues

Overview: An assessment such as additional tax or special rate levied on property owners within a defined geographic area representing the main concentration of beneficiaries of publicly funded infrastructure improvements. Special Assessments Districts (SAD) are also called Community Improvement Districts (CID), Local Improvement District, etc. Application of Special Assessment levy can be targeted to specific types of users or owners within the defined geographic area, such as businesses, owners of existing commercial buildings, or developers seeking construction permits. Rate and length of time of the levy depends on when and how funding requirement is fulfilled. In contrast to Tax Increment Financing (TIF), a Special Assessment is applied to a property's full assessed value rather than the incremental increase in property value.

Key Requirements: Establishing a SAD requires enabling legislation and voter support. Usually, State-level enabling legislation and a local SAD authorizing ordinance constitute the legal environment. Systemwide fiscal regulations should allow special tax assessment and collection at the municipal level. A robust property appraisal system is required.

Challenges: Setting up a SAD can be legally complex and time-consuming, and administration of such tax may be costly if existing collection and assessment systems or processes are not adequate. SADs require adoption of special fiscal regulations that are out of control of municipality, requiring State support. Significant institutional capacity may be required to garner community support at the time of SAD formation. Delineation of special assessment area often follows jurisdictional borders which causes imperfection in allocation of cost to actual beneficiaries.

Opportunities: Generally, SADs raise money without increasing city-wide property taxes. Aligning the costs of public improvements with those businesses and property owners who will benefit the most from such improvements. SADs can be engineered to be a recurring and reliable source of municipal revenue for infrastructure. Less complex than TIF and a cost-effective alternative to municipal borrowing. SAD revenues are highly stable and can be used to offset risk associated with TIF (e.g., a conditional SAD is formed if TIF revenues fall short of expectations). Assessments are collected either up front or annually and usually fixed at the time of SAD formation.

Example: The City of Atlanta utilized revenue from the Midtown Improvement District, a community improvement district, to fund multimodal improvements to enhance walkability conditions on a segment of 5th Street. The Midtown Improvement District was established in 2000 by the Midtown Alliance. In the Midtown Improvement District, property taxes are levied upon buildings to fund transportation improvements within the district. In 2020, the Midtown

[9] Federal Highway Administration, Center for Innovative Finance Support, "Land Value Taxes." https://www.fhwa.dot.gov/ipd/fact_sheets/value_cap_land_value_taxes.aspx.

Improvement District generated $11.3 million in revenues. For the 5th Street Complete Streets project, the Midtown Improvement District contributed $750,000, or 25% of the total project cost.

TAX INCREMENT FINANCING (TIF):

Revenue basis: Future property values

Overview: TIF provides an alternative to finance urban infrastructure in blighted and underdeveloped areas, fostering (private) development that would not otherwise occur in the absence of those up-front investments. TIF aims to capture revenues from anticipated future incremental increases in property or other taxes within a geographically specified area of redevelopment ("TIF district"). Local governments use a debt instruments, such as bonds or loans, backed by the projected future tax revenue within the TIF district. The debt instrument proceeds pay for up-front investments for land acquisition, upgrade of utilities, road improvements, or remediation of environmental contamination necessary to facilitate private development. This up-front public investment creates the real estate market and economic conditions that lead to the incremental increase in land value and tax revenue, promoting a virtuous cycle in which growth pays for growth.

Key Requirements: Requires robust land assessment and tax administration capacity at the local level, as well as strong political backing and enabling legislation. Might require credit enhancement or guarantees from the municipal government. Real estate markets must be strong enough to maintain demand and growth potential for high-density development and prices. The use of TIF requires agreement among overlapping taxing agencies such as school districts, police and fire departments, and public utilities.

Challenges: TIF requires a robust real estate market that is anticipated to grow. Jurisdictions must be prepared to allow TIF uses to absorb and restrict incremental future revenues to the TIF area and uses. TIF districts and guarantor are vulnerable to national and local economic downturns affecting the real estate and credit markets; without real estate growth, revenues may fall short of expectations, creating repayment risks. It requires a strong commitment of the municipality beyond political cycles to ensure continuity of economic development and TIF legislation between administrations.

Opportunities: If properly structured, TIF debt does not affect municipal budgets and complements the traditional infrastructure funding sources. Promotes private development to further economic development and enhances municipal funding and financing of infrastructure. TIF (like SAD) is able to yield the highest revenue among value capture techniques. Strengthens municipal management and relationships as it requires high coordination between entities.

Example: The City of Biddeford, Maine used a mix of value capture techniques, including TIF, to fund the Pearl Street Garage parking structure and related pedestrian amenities that had long been recognized as important for the city's downtown vitality and economic development. Projections indicated that parking revenues would not sufficiently cover the costs of the facility, so an allocation from an existing TIF district was used to close the funding gap. The Route 111-Mill Redevelopment Tax Increment Financing District was established in 2004 to capture revenue from commercial development to fund public facilities and improvements and city economic development projects. Since its inception, the TIF development program has been amended 10 times and the TIF period has been extended to last a period of 25 years. The TIF

district allocated $8.4 million to the Pearl Street Garage project, which closed the funding gap and allowed the city to meet its commitment to building the facility without residential property taxes.

ASSET RECYCLING: LEVERAGING PUBLIC ASSETS

Revenue basis: Lease or sale value of public assets

Overview: Asset recycling refers to monetizing existing infrastructure and engaging private partners to invest in and upgrade existing assets. The public agency retains ownership and control through long-term leases. Lease revenue can then be used to fund new infrastructure. Asset recycling can be applied to existing facilities or future infrastructure projects.

Key Requirements: (1) Enabling legislation and authority to enter into Public Private Partnership (P3) Concession agreements; (2) Assets that the agency has identified as available and eligible to lease, consolidate, or sell; (3) The market value of the public assets must be clearly established and have potential to generate additional value; (4) Must effectively communicate the rationale for sales or lease of public assets (e.g. consolidation, underutilized asset, etc.) to stakeholders; and (5) The public agency must have negotiating capacity comparable to that of potential private sector partners to achieve fair pricing.

Challenges: (1) Jurisdiction may not have the expertise to determine the optimal pricing and market demand for the asset over time; (2) Regulatory and legislative limitations on public asset disposition may stall or encumber the process; (3) Public perception of long-term lease of public-owned land or infrastructure is important, where the public may have concerns regarding the loss of control over future development and long-term asset conditions. (4) Negotiated disposition price of publicly owned assets may face public objection and raise political concerns.

Opportunities: Asset recycling can result in long-term direct cash revenue for a municipality through putting vacant or underutilized assets back into productive use. Asset recycling has minimal negative fiscal impact and is a relatively straightforward two-way transaction (once the value to private sector partners is established and the price has been negotiated). This technique balances private sector risk and reward with risk and value from surrendering operational control of asset by the public sector through asset sales and leases.

Example: The City of Amesbury, Massachusetts leveraged underutilized municipal land through asset recycling and transformed the former Titcomb landfill into a renewable energy generation site. The city leases the land to Kearsarge Energy LP, who developed, financed, and built the power plant in collaboration with NEC Energy Solutions. Kearsarge will continue to own and operate the system once the project is fully completed. The site hosts one of the first solar plus energy storage projects in Massachusetts and will produce an estimated 5.2-million-kilowatt hours of electricity annually once completed. The project generates tax and lease revenue for the city in addition to energy credits that will save the city an estimated $4 million in energy spending over a 20-year period.[10]

[10] Federal Highway Administration, Center for Innovative Finance Support, “Project Profile: Amesbury Landfill Solar Plus Storage Project, Amesbury, Massachusetts.” https://www.fhwa.dot.gov/ipd/project_profiles/ma_amesbury_landfill_solar_plus_storage_project.aspx.

JOINT DEVELOPMENT AND AIR RIGHT DEVELOPMENTS

Revenue basis: Future development potential and returns

Overview: Joint development is a value capture strategy allowing a transportation agency to coordinate with developers to improve the transportation system and, at the same time, develop real estate in ways that share costs and create mutual benefits. Using air space above, below, and nearby or adjacent to highway rights-of-way provides benefits via transfer of rights and joint development. A public agency utilizes land it owns, often in the form of surface parking lots or excess right-of-way, for a private redevelopment project and then shares profits with the private sector developer. Transit joint development creates revenue streams that can be used to cover transit system operating expenses and finance capital projects. A transit agency might cooperate with a developer to convert a publicly owned park-and-ride lot into a mixed-use development of offices and housing. Air rights over public land or facilities may also be leased or sold for joint development. Depending on how much land the agency owns, its role in the development could be limited.

Key Requirements: When new Federal funding or land previously acquired with Federal funding is used for a joint development, it must go through a Federal approval process; the combination of local political culture, State law, and agency regulations must allow for the lease or sale of public assets. There must be sufficient market demand for additional development in the location where the rights will be assigned. Legal provisions that allow cities to create and sell additional development rights. The city must have a comprehensive plan for growth, planning, and infrastructure management. The city must have adequate administrative capacity.

Challenges: This technique is vulnerable to macroeconomic conditions (more than many other land value capture tools). For efficient and equitable implementation, strong and transparent land use controls are prerequisites. Strong real estate markets, significant institutional capacity, and clear policy guidelines are needed to undertake joint development. Joint-development plans must be in line with local market demand and satisfy local planning efforts for density, parking, and affordable housing.

Opportunities: This technique generates cash for front-funding or expedited cost recovery of infrastructure projects. The sale of development rights better mitigates the risks of loss of control over land use relative to selling land title alone. Air rights are most suited to situations where land prices are high and there is significant market demand for new housing or commercial space. This combination of factors generally occurs only in dense, urban cores and less likely to occur in settings with vacant parcels.

Example: The Nevada Department of Transportation (NDOT) entered into an air rights agreement and lease for the airspace above I-80 in Reno, NV with a private developer for a 15-story hotel-casino development in the 1970s. After constructing a concrete and steel cap above I-80, the project was halted because the financing for the project fell apart. The lease was transferred among private parties over the years until Walgreens secured an air rights sub-lease to build a drugstore on the deck in the late 1990s. Walgreens then rehabilitated the deck and constructed the drugstore which services the nearby downtown and University of Nevada Reno campus. The air rights agreement with Walgreens generates revenue for NDOT while utilizing a previously vacant space to fulfill a community need.

SPONSORSHIPS AND NAMING RIGHTS

Overview: An innovative way to offset the costs of construction, operation and maintenance while providing enhanced services to the public. Transit Agencies can raise revenue for operating and maintenance expenses by selling advertising to private companies within places like transit stations and bus shelters. Naming rights and sponsorships are often used on transit facilities, where transit agencies sell the right to name a station for a defined period of time to generate revenue to subsidize operating expenses.

Highway sponsorships can include either funding or volunteer work to offset highway operations and maintenance costs. An example is State Adopt-a-Highway programs. Sponsorship signage must comply with the Manual on Uniform Traffic Control Devices, or MUTCD. It is important to note that Federal law prohibits commercial uses like advertising and naming rights within Interstate Highway System right of way.

Key Requirements: Must adhered to FHWA Policy Order on Sponsorships (Order 5160.1A Issued in April 2014), which distinguishes advertising (which is prohibited) from sponsorship (which is encouraged). Sponsorships provide companies and organization with high quality exposure from high ridership volumes.[11]

Challenges: It must be weighed against many rules covering safety, discrimination, billboards, and government owned facilities. The main legal considerations are the Federal Highway Beautification Act (Title 23, United States Code), First Amendment preventing company from being excluded from naming rights transaction because of its image, Fourteenth Amendment prevents agency from rejecting bidder based on agency's politics, and State laws regarding signage and nuisances. Legal challenges included: Portland, ME's bus service faced controversy over ads promoting marijuana ballot initiative on buses, Los Angeles Metro canceled plan to sell naming rights; and political challenges (concerns over losing historic landmarks) and difficulty navigating the transport network when names change.

Opportunities: Advertising can raise moderate sums of money for operating and maintenance expenses or supplement construction. Transactions are usually not complex, as they involve standard procurement processes and generate new revenues with little public investment. Transactions also provide political opportunity for naming rights linked to subsequential economic benefits. The volunteer programs improve social and environmental benefits through cleanup activities, gives civic pride, and serves as a reminder not to litter while saving tax-payers money.

Example*:* In 2014, the Ohio Department of Transportation (ODOT) entered into a naming rights agreement with State Farm Insurance to raise money to offset transportation budget shortfalls. Through the agreement, State Farm advertises on ODOT Freeway Safety Patrol vans that provide roadside assistance for stranded motorists and to help clear crashes and stranded vehicles from busy highways. The agreement rebrands the Freeway Safety Patrol as the State Farm Safety Patrol. The sponsorship will generate $8.65 million in revenues over the 10-year contract period, which will help to offset the cost of the program and other State maintenance obligations.

[11] FHWA, Frequently Asked Questions—FHWA Order 5160.1A—Policy on Sponsorship Acknowledgment and Agreements within the Highway Right-of-Way. *https://mutcd.fhwa.dot.gov/resources/policy/sponsorshipfaq/#q1*.

TRANSPORTATION UTILITY FEES (TUFS)

Revenue basis: Current and future development of the traffic generation profile for a particular land use

Overview: TUFs, also known as street user fees or road maintenance fees, are ongoing fees paid by real estate occupants (i.e., owners or tenants) according to the intensity of transportation use rather than the value of property. TUFs are typically used for maintenance and repair of existing roads and target charges to properties that generate higher traffic, such as commercial properties. A TUF may be applied across an entire jurisdiction or within a specified benefit area. TUFs charge both existing and future users, which is a more equitable mechanism in areas that are already developed.

Fees are based on the cost of estimated transportation utilization rather than actual or observed use. Estimated transportation utilization is calculated based on the character and density of property occupants, and on assumptions about their use of transportation facilities such as roads, public transportation, or parking.

Key Requirements: A direct and equitable connection to the service provided must be demonstrated. There must be enabling legislation allowing the municipality to charge the fee. Though fees are not subject to voter approval, political will and stakeholder support are important for the success of a TUF program.

Challenges: TUFs involve new administrative and institutional requirements and may be difficult for a locality to implement or administer. TUFs have raised questions as to if they are truly a fee or instead a tax (municipalities generally have less power to impose taxes than to charge fees). Legal challenges have also arisen due to the fees being charged involuntarily and calculated based on assumed trips taken; some residents who do not utilize the roadways do not want to pay the fee but do not have the option to opt out.

Opportunities: TUF programs are advantageous because they provide new revenue streams that are based directly on the estimated use of a city's transportation network. They also allow implementing agencies to incentive behavior that reduces stress on the transportation network, such as travel by foot, bicycle, or transit. TUFs are an equitable means of raising revenue to address backlogs in infrastructure maintenance and preservations needs not met by other funding mechanisms like the gas tax, property taxes, and other funding mechanisms. The fees can support timely preventative maintenance, which can extend pavement life.

Example*:* The City of Hillsboro, Oregon established a TUF in 2008 to support citywide investments in pavement condition and bicycle and pedestrian facilities. The city collects TUF fees from all residential, business, government agency, school, and nonprofit property owners through regular city utility bills. The size of the fee is based on the estimated trip generation rates from the Institute of Transportation Engineers Trip Generation Manual. Residential properties in two categories, single-family and multifamily, are charged flat monthly fees. Nonresidential properties pay a base charge of $8.20 per month plus a calculated charge according to property type category and square footage. Hillsboro's TUF generates approximately $5 million in annual revenues. It is estimated that TUF revenues will allow the city of Hillsboro to zero out its entire backlog of street maintenance projects by 2024.

General Process and Time Needed to Implement Value Capture

For a successful value capture implementation, the agency or jurisdiction will need to first establish the need for funding, whether it is a single project, series of projects, or program. The appropriate or preferred value capture technique can then be determined based upon the size of the funding need, duration of the funding need, the intended application, legislative and regulatory environment, and resources available. This section provides the basic steps and indications of the level of effort and time required to implement various forms of value capture. Table 4 describes the general steps leading towards implementation and the major tasks and considerations associated with those steps.

Table 4: Steps, Considerations, and Tasks for Value Capture Implementation

Step	Considerations and Tasks
Define Funding Need	• Faster delivery of projects • Ability to fund more projects • Ability to meet local share requirements • Insufficient funds for critical infrastructure need • Project(s) not eligible under traditional funding sources
Define Intended Use of Funds	• Capital Improvements: Single project, multiple projects, or infrastructure program • Maintenance and rehabilitation • One-time investment or ongoing revenue source • Fund infrastructure to support or induce economic development • Funding to ensure that infrastructure provision keeps pace with growth in demand (development) • Cost recovery or new revenue
Review Enabling Legislation	• Determine if enabling legislation exists (letter to State Attorney General, municipal legal counsel). • Monitor bills under consideration for techniques not currently supported by enabling legislation. • Determine statutory requirements for techniques that are enabled by State law. • Review other local implementations of the value capture technique to anticipate potential obstacles and avoid legal challenges.
Make the Business Case and Build Stakeholder Support	• Create opportunities to engage and educate policy makers (from municipalities, counties, and State level), the public, or private sector including employers/businesses and developers. • Communicate and advocate the benefits of value capture with legislators and local businesses.
Identify and Build Required Resources	• Assess agency strengths, weakness, and skills required to implement value capture techniques, e.g., using the Capability Maturity Matrix. • Evaluate operations, resources, and systems needed including: • Disposition of surplus excess properties • Develop communication and relationships with peer agencies, advocates, and public

Step	Considerations and Tasks
	• Systems for administration, finance, accounting, and real estate assessment • Assess gaps in advocacy and leadership • Build or maintain access to internal staff or external experts able to navigate legal requirements, assess market conditions, make reliable financial projections (finance), collect and track revenues (accounting) and negotiate effectively with private developers. • Evaluate project risks including political, financial, and real estate market risks.
Develop Implementation Plan	• Match value capture technique with funding and infrastructure needs, enabling legislation, skills, and resources available, and political and business support. • Assign tasks and responsibilities.

The research, communication, and building of expertise are investments that will enable new funding and revenue to be directed at needed capital or maintenance projects. Startup time can vary, as value capture is not a one-size fits all funding mechanism. As with any funding or financing strategy, value capture requires careful research to determine the most effective and viable options for the funding need in terms of scale, duration, local restrictions, and other funding resources available. The table below, which is organized by overarching strategy, describes each value capture technique's applicability towards projects or programs and the level of effort and timing for implementation.

Table 5: Timing and Level of Effort for Value Capture Techniques

Strategies	Techniques Included	Project or Program	Timing for Implementation and Level of Effort
Cost Sharing Strategies: growth paid for growth	• Developer Voluntary Contribution • Transportation Impact Fees/ Mobility Fees/Multimodal Fees • Negotiated exaction	Contributions can be towards individual projects, or to a dedicated fund for infrastructure projects.	Once established, projects supported by impact fees generally proceed in tandem with project development. For smaller projects dealing with bed/bike, signage and landscaping, the timing is in the 12-to-18-month range. Fees are collected through zoning and permitting processes. Needs public support if tied to zoning and density requirements. Transactional based VC techniques (exactions) will require more staff time for negotiations on a per project basis and will result in collection variability.
Maintenance, Correcting Deficiency, Preservation	Transportation Utility Fees, Road Maintenance Fees, etc.	Can be a new source of revenue to address backlog of road maintenance and preservation.	TUF and other maintenance fees may require new administrative methods for tracking and collection. Requires initial analysis and expertise to establish rates. Requires public and business support. Once established and administrative processes setup, fees may need to be renewed or revaluated at defined intervals.
Cost Recovery (Special Fees and Taxes)	• Special Assessment District • Community Improvement District/ Business Improvement District • Land Value Tax	Can be a source of revenue for transportation projects, programs, or long-term maintenance. Some programs incorporate defined duration for districts and dates for renewals.	Debt pledges and financing will provide capital funds sooner, especially if existing infrastructure bank or jurisdictional finance options are available. Building finance capability will require internal or external finance expertise. Creating an entirely new infrastructure bank may take multiple years to fund depending upon number of jurisdictions and complexity of agreements involved. New CIDs or BIDs focused on smaller projects can take 1 to 2 years with appropriate support.
Economic Growth, Attract Development, Job Creation	• Tax Increment District (TIF)/Tax Increment Reinvestment Zone (TIRZ) • Sales Tax Increment District • Transportation Reinvestment Zones	Contributions can be towards individual projects, or to a dedicated fund for infrastructure projects encouraging economic development and improved access.	Once enabling legislation exists, zones can be established quickly. In Texas, the El Paso TRZ was established within a year of passage. Zones overlapping municipal boundaries require coordination and may increase time to initiate. Generating support and passage of enabling legislation if it does not exist can add years to process.

Strategies	Techniques Included	Project or Program	Timing for Implementation and Level of Effort
Joint Development, Mixed Use Development, etc.	• At-Grade Right-of Way (ROW) Agreement • Above-Grade ROW Agreement/Air Right Development • Below-Grade ROW Agreement/ Utility Joint Development	Land disposals create short-term one-time revenue. Long-term leases can generate consistent funding. Scale of funding is based on the size and number of agreements. Often contributes to operating, capital, or general transportation funds.	Unless there is a pre-established set of guidelines or streamlined process, negotiation and financing for projects can take years. Engineering constraints, local politics, and real estate markets can impact and delay agreements. Most joint development projects take about 2.5 years to implement once a project and funding have been agreed upon. Above and below grade ROW agreements are more complex and often take significantly longer than at grade developments, with experienced staff and motivated developers can take upwards of 6 years.
Recycle the Value of the Existing Infrastructure Assets	Asset Recycling	Has potential to become a major source of project or program funding depending upon the size of the asset recycled. Can unlock a large amount of capital upfront if the P3 agreement includes large investors of bonding.	Requires planning, real estate, negotiation, legal, and pricing expertise to develop long-term leasing strategy and P3 agreement. This expertise is instrumental in protecting the public interests and assets. Larger or more valuable the asset is, the greater the requirements for review, analysis, communication, and public outreach needed. Smaller properties and assets can include parking facilities and parcels with lower risk, expertise requirements, or time needed to establish asset recycling agreement. Inclusive of architecture and engineering phase, smaller projects may take up to three years to develop.
Offset Operating & Maintenance Expenses	• Naming Rights • Sponsorships and Advertising	Funding can be incorporated into a general fund for transportation, or to pay in-part for small transportation programs or services.	Low level of effort. There are private firms that help States, agencies, and municipalities make connections with sponsors. Low risk with sponsorships as the sponsor is investing in the visibility of assets and does not retain any ownership of the facility.

Implementation Considerations

There are several considerations and key steps that should be factored in while pursuing a value capture strategy. First, it is important to verify enabling legislation exists and statutory requirements for value capture can be met in your area. If legislation does not exist, implementation will be delayed as you seek support for legislative approval. Creating sustained support from the public, business leaders, local politicians, and policy makers is important for implementation and for longevity as some value capture techniques require renewal. Upon nearing implementation, the value capture implementation should be appropriately specified to meet the funding needs in terms of funding needed, duration, and consider potential risks.

For all these aspects you will need the support of internal or external experts, which will ensure value capture funding is appropriate for the use, will withstand challenge, and was designed with potential risks in mind. The details for the main implementation considerations and potential impediments are presented below:

Verify Legal and Statutory Requirements

The successful implementation of value capture techniques depends on compliance with existing statutory requirements for their use. Statutory requirements can become significant delays to the use of certain value capture techniques if a project design does not fit into the statutory framework or if there are changes to existing State legislation after an agency has already begun the implementation of a value capture technique. Some value capture techniques may be vulnerable to judicial challenges if the authority of a jurisdiction to implement such techniques is unclear under existing legislation. An important step to maintaining value capture when legal authority is unclear or ambiguous is to document and establish the legal precedent for meeting the core legal tests for value capture (rational nexus, rough proportionality, and but-for). See the “Essential Nexus, Rough Proportionality, and But-For Tests” document for more information on legal standards, issues, and tests surrounding value capture techniques.

Building Public, Business, and Political Support

The lack of public or stakeholder support for a specific value capture technique can present itself as a hurdle to implementation, especially if a project is contingent on voter approval. Ways in which agencies have navigated public or stakeholder opposition to a value capture technique center largely on direct public outreach programs to address misconceptions about value capture and to educate the public on the benefits of the project and how the technique distributes the cost. Public processes also result in changes to the project design to ensure that input from members of the public was heard, and potential impacts are reviewed and addressed in the planning process and the value capture technique implementation.

Although a project may meet all the criteria to fulfill statutory requirements for a value capture technique, it may still lack the support of elected representatives for reasons political or otherwise. The following can help bolster support in the long run:

- Continue with patience and persistence to build project supporters despite political conditions. After a lengthy delay, a TIF was implemented in Yankton County, South Dakota

following the election of new County Commissioners that were in favor of a road fostering economic development.

- Utilizing and developing powerful project champions is important. Local mayors in Maricopa County, AZ performed direct public outreach programs that helped the public to better understand how the funding was going to be used and how these projects benefit the region. These efforts secured the reauthorization of the countywide sales tax district in the 2004 ballot measure.
- Make connections with developers and businesses. Make the case for mutually beneficial improvements to foster economic development or mitigate impacts of growth or changes in density.

Mitigate Risk and Create Flexible Strategies

Ill-suited or implemented value capture can be critiqued for creating market distortions, by making development more expensive through fees or exactions, developers may build less. Therefore, careful market studies and planning analyses are important for implementing a flexible and saleable value capture strategy.

Some value capture techniques inherently involve market risk which can affect the ability to successfully generate adequate revenue to fund the project. This market risk may be related to unexpected responses or inadequate buy-ins from stakeholders. Similar to the strategies for navigating an economic or real estate market downturn, an implementing agency should anticipate potential ways in which key stakeholders may respond to the project or value capture mechanism, plan for how to address funding shortfalls, and create contingency plans.

It is best to prepare for the possibility of a downturn from the project's inception, anticipating potential ways in which key stakeholders may respond to a downturn, planning for how to address funding shortfalls, and creating contingency plans. Preparation for a potential market downturn will require a detailed understanding of the local and larger real estate markets. These can be obtained through internal or external transportation and market analyses to inform the range of revenue outcomes.

Some agencies face the challenge that the impacts of a value capture technique may affect different areas of the jurisdiction in ways that are at odds with other public policy goals such as job attraction or affordable housing. Similarly, sub-areas within a jurisdiction may have significantly different needs from the rest of the jurisdiction.

- When Pasco County realized that their impact fee program could disincentivize certain types of development in some areas within the county, they established a program to reduce mobility fees for certain land uses.
- The City of Portland realized that two areas in the city experienced higher levels of infrastructure demand than the rest of the city, so they created two overlay districts for their TSDC program that fund transportation infrastructure projects within those high-demand areas.

Staff Capacity and Expertise

Data collection for a full market study is time consuming, particularly for agencies that do not have access to regional data and analysis provided by a metropolitan planning organization, regional planning agency, council of governments, or university research department. Analyzing the data requires experience in planning and land use, market analysis, and specialized knowledge of the real estate market.

Large agencies, such as transportation departments of major cities or metropolitan planning organizations for large metropolitan areas, may have the resources to maintain a dedicated staff with the necessary skills and experience to perform complex market analysis. Smaller agencies may have the staff capacity and experience to perform market analysis for smaller infrastructure projects and may opt to hire consultants for more complex projects. Agencies of all sizes and capacities sometimes opt to hire consultants with expertise in real estate analysis, financial analysis, legal and regulatory analysis, or environmental economics when a market analysis incorporates those more specialized aspects. Some agencies may choose to accept market analyses provided by the developer. Preferably, such studies will be performed by an independent consultant hired by the developer, or at the very least, will be reviewed by an independent consultant hired by the agency. Independent analysis is not only the basis for good decision-making, but it is also the basis for creating stakeholder buy-in.

As these are a select list of high-level considerations, there are many more resources available to help navigate and evaluate your use case for value capture. The following resources will help agencies assess their readiness, the skills needed to pursue, and research and guidelines for implementing value capture. We recommend starting with FHWA's Center for Innovative Finance Support's Value Capture Resource page which contains information for practitioners and policy makers.[12] The website includes implementation manuals, case studies, how to briefs, and links to other tools and resources.

[12] FHWA Center for Finance Support, Value Capture Resources website: https://www.fhwa.dot.gov/ipd/value_capture/.

Conclusion

Transportation infrastructure generates economic activity by making new connections and/or by reducing transportation time and cost. These savings and new connections have value for households and businesses that use the new infrastructure. Depending on whether the facility serves passengers or freight, these trips result in new expenditures at retail stores and restaurants, better workforce access for employers, and more efficient access to inputs and customers for manufacturers, suppliers, and warehousing and distribution businesses. The need for investment and maintenance in the system requires new dedicated forms of funding to fill the $8.2 trillion need by 2039 in infrastructure funding across the US.[13] This need will stifle economic growth and mobility without these investments.

Value capture enables districts, neighborhoods, municipalities, counties, States, and nations to generate needed funding for transportation projects or programs. Value capture is a more equitable way of generating funds for infrastructure as a portion of the windfall or appreciation can be dedicated to pay for infrastructure that will benefit residents and businesses in the project area by creating economic value. Value capture revenue can be more flexible than Federal or other local funding and be used to fill in funding gaps, pay for specific projects, or be put to uses those other funds are not eligible for. Given the persistent and growing back log of transportation needs, value capture can be a long-term solution to closing local gaps and worth the short-term startup efforts.

The development and implementation of value capture techniques may require more planning than increasing rates or modifying existing traditional sources of transportation funding and finance. Value capture will require upfront investment for research, communication, and developing support prior to implementation. However, once enabling legislation is available it can be implemented with support and administered efficiently while generating flexible funds. Education and outreach will be important to demonstrate the benefits of generating local funding to deliver more projects, projects sooner, or projects and maintenance that would not have been funded otherwise.

Finally, value capture helps align transportation investments with other public policy goals including job creation, affordable housing, growth management and congestion reduction. An evaluation of the impacts of a transportation investment on other public policy areas, including how the funding plan affects the private sector response to the new or improved infrastructure, is a key component of the business case for that investment.

[13] American Society of Civil Engineers, 2021 Report Card for America's Infrastructure, https://infrastructurereportcard.org/.

Appendix: Assessing the Funding and Revenue Sources Needed

To pursue value capture as a supplement or main source of funding, the revenue needs must be clearly established. This needs assessment framework can apply to districts, municipalities, counties, and State agencies. The needs assessment should address:

Project or program funding needs: What type of transportation funding need or deficiency is being experienced? Is there a funding need for *one or multiple projects*? Or is there a demand for more transportation funding and project delivery that necessitates a *program*?

Revenue generation potential: What is the scale of funding to be generated? Will it need to be sustained?

Timing: Is this a one-time need that will be completed with the conclusion of the project or repayment of the associate debt? Is it preferable for the funding need be periodically reviewed and renewed? Will the funding need be long-term or indefinite?

The table below describes some of these needs, revenue potential and timing attributes.

Table 6: Descriptions of Value Capture Techniques and Key Attributes

Category	Technique	Description	Project or Program	Revenue Generation	Timing
Developer contributions	Impact fees	Fees imposed on developers to help fund additional public services, infrastructure, or transportation facilities required due to the new development.	Ideal for smaller district and municipal projects or programs. Potential applications: partial or gap funding for complete streets, roadways, and interchanges. Can be directed to specific projects or a fund.	One-time fees for new developments are reliant on economic and real estate market conditions.	Each development will only pay in once. Revenues streams are dependent upon continuous development.
	Negotiated exactions	Negotiated charges imposed on developers to mitigate the cost of public services or infrastructure required as a result of the new development.			
Transportation utility fees	Transportation utility fees	Fees paid by property owners or building occupants to a municipality based on estimated use of the transportation system.			
Special taxes and fees	Special assessment districts	Fees charged on property owners in a designated district whose properties are the primary beneficiaries of an infrastructure improvement.	Can be structured for single or multiple projects, as well as programs.	Fees are recurring and can be structured as short- or long-term revenue stream based upon need	Districts can be created for a finite set of time, with options to renew.

Category	Technique	Description	Project or Program	Revenue Generation	Timing
	Business improvement districts	Fees or levies charged on businesses in a designated district to fund or finance projects or services in the district's boundaries.		or legal requirements.	
	Land value taxes or split-rate taxes	A lower property tax rate applied to privately created building values and a higher rate applied to publicly created land values.	Recurring revenues overtime can support multiple small projects or programs.	Encourages density as parcels vacant or occupied with structures will generate the same revenue.	Tax revenue remains static as it only applies to land values and not structures. Requires reassessment of land overtime for revenues to grow in future years.
	Sales tax districts	Additional sales taxes levied on all transactions or purchases in a designated area that benefits from an infrastructure improvement.	Can be structured for single or multiple projects, as well as programs.	High revenue potential. Fees are recurring and can be structured as short- or long-term revenue stream based upon need or legal requirements.	Districts can be created for a finite set of time, with options to renew.
Tax increment financing	Tax increment financing	Charges that capture incremental property tax value increases from an investment in a designated district to fund or finance the investment.	Can be structured for single or multiple projects, as well as programs.	Fees can be recurring of have a scheduled sunset with options for renewal at predetermined intervals	Districts can be created for a finite set of time, with options to renew.
	Transportation reinvestment zones	Transportation reinvestment zones allow for a broader range of transportation projects. The local governing body designates a zone in which it will promote a transportation project. The zone does not require the local entity to create a board.			
Joint development	At-grade joint development	Projects that occur within the existing development rights of a transportation project.	Includes inherent risk and costs. Revenue potential depends on the number of suitable sites, markets, and sale	Revenue structure must take into consideration the operations and maintenance of structure and impact on transportation	Sales are a one-off, while leases are long-term. In many cases leases can be transferred with approvals from agencies.
	Above-grade joint development	Projects that involve the transfer of air rights, which are development rights above or below			

Category	Technique	Description	Project or Program	Revenue Generation	Timing
		transportation infrastructure.	versus lease agreements.	infrastructure adjacent, above, or below development. Has potential for being revenue neutral.	Includes options for renewals and
	Utility joint development	Projects that take advantage of the synergies of broadband and other utilities with highway right-of-way.	Project oriented and can be applied to major ROW projects if utility partners exist, need low-cost access to the ROW, and are willing to share costs.	Cost saving measure but must be structured to ensure both parties' benefit.	Revenues can be spread overtime of one-time up front.
Concessions	Asset recycling	Involves the recycling of existing public infrastructure assets through sale or lease to the private sector, with all funds received being invested in new infrastructure.	Can be a significant revenue source for mega projects, bundles of projects, or large programs.	High as most assets are tens to hundreds of millions of dollars.	Typically, long-term for leases of facilities with proven less risky returns.
Naming rights	Naming rights	A transaction that involves an agency selling the rights to name infrastructure to a private company.	Program, services, or small projects. Revenue is generated sell	Low barrier to entry	Often includes multi-year deals with the opportunity to renew.

Source: "Value Capture: Capitalizing on the Value Created by Transportation - Implementation Manual" EDC-5, Aug 2019