MODULE 5: INVESTING IN TOD

 Transit Oriented Development at a Corridor Scale

 MAASSEN, ANNE, INDIRA MASULLO, AND JULIÁN SOSA. “A BUSINESS MODEL FRAMEWORK TO ACCELERATE TRANSIT-ORIENTED DEVELOPMENT (TOD) INVESTMENTS IN EMERGING CITIES.” WORLD RESOURCES INSTITUTE. FORTHCOMING 2017.
Module Objective and Outline

**Objective:** At the end of this module, you will understand and identify the elements of a business model for sustainable investments in TOD projects that need to come together for a corridor TOD investment

**Outline**
- The TOD investment
- Business model approach for TOD
- The business model framework
  - Investment components
  - Delivery mechanisms
  - Funding sources
  - Financial products
Financing TOD: Some Lessons Learned

- At the corridor scale, it can be difficult to structure manageable transaction sizes.
- Institutional and contractual frameworks are needed as a basis for productive commercial relationships and to guide decision-making.
- It is important to unlock and capture funding sources to pay back investments, and not purely rely on public budgets to fund infrastructure and services.
- Third party finance is likely to be essential for the kind of capital-intensive, and upfront investments like TOD.
TOD Investments

The TOD of Fruitvale Village in California, U.S.A.

**TOD investment:** the allocation of resources by public, private, and other stakeholders that are expected to generate the range of benefits associated with TOD.
TOD: Types of Capital Investment

When considering financing strategies for TOD corridor development, what needs to be financed?

- **Transit Infrastructure**
  - Investment Size: Large
  - Capital costs for BRT, LRT, or metro systems
  - Often paid by public sector, but funding can be raised through capturing land value uplift and real estate improvements

- **Street Infrastructure & Public Realm**
  - Investment Size: Small-Medium
  - Local street improvements & sidewalk/NMT infrastructure
  - Can be paid by developers in strong markets or by local government

- **Real-estate development / Housing Construction**
  - Investment Size: Varies
  - Consists of construction costs of residential/commercial buildings
  - Most costs to be paid by developer, but public subsidy sometimes required if weak market or affordable housing is required
A Business Model for TOD Investments

A business model is a framework that includes all of the elements that make it possible for an investment to generate a return. A TOD business model is a framework that includes all the elements that allow a TOD investment to generate [social, economic, environmental and financial] return.

The Round, a TOD in Beaverton, Oregon, U.S.A.

Why take a business model approach to TOD investments?

TOD business model framework can help build and create:
- **Capacity**: Systematic understanding of options
- **Dialogue**: Common language for stakeholder dialogue
- **Innovation**: Creation of context-specific approaches
The Business Model Framework

How to mobilize investment capital?

What to invest in?

How to pay for it?

How to structure implementation?
The various assets and processes that generate cost and revenues over the course of a TOD investment.
There are three different types of investment components:

- **Tangible assets**: material infrastructures, technology, equipment that must be manufactured, bought, built, and installed. It includes:
  - Land, horizontal infrastructures, and vertical constructions

- **Intangible assets**: non-material factors that must be part of the investment to achieve desired benefits. It includes:
  - Resource efficiency, accessibility, inclusiveness, safety, cultural preservation

- **Processes**: procedures and actions associated with planning, implementation, and maintenance
Corridor scale
Investment components

Tangible assets

- Land
- Transit Track (Bus Lanes, Railways etc) and Transit stations
- Roads, street networks, pedestrians, bike lanes,
- Other TOD related investments (station plaza, bus terminal, public amenities, etc)
- Public and private buildings
- Public utilities

Intangible assets

- Articulated Density
- Public safety
- Walkability
- Mixed land use
- Cohesive Community
- High Quality Public places and Cultural heritage

Processes

- Feasibility studies
- Detailed engineering and investment cost estimate
- Financing arrangement
- Securing lands and site preparation
- Procurement and construction
- Monitoring and evaluation
- Operation and Maintenance
- Community engagement (all through critical stage from planning to implementation)
The commercial, contractual, and institutional arrangements exist to distribute the responsibilities and risks of the investment.
Three types of delivery mechanisms used for a TOD investment:

- **Contracts**: contracts that determine how the revenues and costs arising from the investment components are distributed
- **Legal entities & structures**: Legal entities dedicated to the implementation of a TOD investment
- **Institutional frameworks**: Laws and institutional arrangements that set enabling conditions for TOD investments to take place
Revenues, and other non-reimbursable monetary support, that can be used to repay the costs of the investment components.
**Funding sources: investment revenues**

- **Investment revenues**: revenues generated by the TOD investment itself, in the form of direct payments received in return for products and services
  - Investment revenues include: **service charges**, **land value increments**, and **air right sales**
- **Service charges**: revenues obtained from charges applied to the use of transit services and from charges related to real estate assets
  - Farebox revenues
  - Real estate leasing
  - Betterment levies

**Plaza Alfonso López, Manizales, Colombia**: a TOD project that utilized betterment levies to enable investment

Land value capture: revenues gained by capturing some of the land value created through public sector intervention (FAR increase or changes in regulations) as well as public and private sector investments (transit, TOD investments)

- Public mechanisms include: Land readjustment, urban redevelopment, land sale/lease at post-rail prices; property and land tax, special assessment tax, tax increment financing, exaction and impact fees
- Private mechanism harnesses increased land value based on preferential access to land

Kowloon Station, Hong Kong: a TOD project where stakeholders utilized post-rail land value capture

Funding sources: investment revenues

**Sale of air rights:** transfer or sale of development rights through the auctioning of development rights. In Sao Paulo, the difference between the basic FAR and the maximum FAR is sold through auctioning. Authorities can also provide density bonuses (FAR increase beyond the zoning code) in exchange of direct payment or provision of affordable housing and public space by private developers.
Funding sources: investment incentives

NoMa District, Washington D.C.: a TOD project where tax credits were used to attract new tenants to the area

Investment incentives: incentives intended to induce stakeholder investment for TOD projects, by reducing the overall investment, through provision of grants and/or fiscal incentives:

- **Grants:** contributions to a TOD investment in monetary or physical asset form that can be received from public or private budgets. **Public grants** play a particularly important role in TOD investment

- **Fiscal incentives:** incentives, typically given in the form of reduced tax rates, tax exemptions and differed tax, provided by governments.
Funding sources: own source contribution

Own source contribution: existing public or private budgets that are directly mobilized for a TOD investment.
Options for mobilizing investment capital that come at a cost for the financial service provided.
Financial products

- TOD investments typically require third party capital, or financial products, to achieve adequate financing.
- TOD investments often combine equity and debt - this combination is known as an investment’s capital structure.
- When forming a TOD investment’s capital structure, stakeholders must take into account costs of capital.
- The higher the risk of a TOD investment, the higher the costs of capital.
Financial products: equity

**Equity**: a monetary contribution used to fund TOD investments that is obtained in return for an ownership share in the future profits of the investment.

Two different types of equity exist:

- **Direct equity**: a direct investment made by equity investors in a TOD project.
- **Indirect equity**: an investment made by equity investors in funds or a portfolio of projects.
Financial products: loans

- **Loans**: monetary contributions obtained from creditors with specified conditions for repayment of the initial amount of money borrowed and interest
- **TOD investments** often utilize commercial and concessional loans
  - **Commercial loans**: loans provided to TOD investments with interest rates at market value; repayment required in a fixed time period
  - **Concessional loans**: loans provided to TOD investments that often have interest rates below market rate; more flexible repayment schedules allowed
### Financial products: loans

<table>
<thead>
<tr>
<th>Type of loan</th>
<th>Concessionality</th>
<th>Seniority</th>
<th>Targeted</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Commercial</strong></td>
<td>None</td>
<td>Senior</td>
<td>No</td>
</tr>
<tr>
<td><strong>Concessional</strong></td>
<td>Lower interest rates/ longer maturities</td>
<td>Senior or junior</td>
<td>No</td>
</tr>
<tr>
<td><strong>Subordinated</strong></td>
<td>None</td>
<td>Junior</td>
<td>No</td>
</tr>
<tr>
<td><strong>Syndicated</strong></td>
<td>None, but larger amount of capital leveraged</td>
<td>Senior</td>
<td>No</td>
</tr>
<tr>
<td><strong>Acquisition</strong></td>
<td>Longer maturities, favorable interest rate</td>
<td>Senior</td>
<td>Higher loan to value ratio</td>
</tr>
<tr>
<td><strong>Construction/Bridge</strong></td>
<td>No: short-term, high interest rates, backed by real assets</td>
<td>Senior</td>
<td>Yes: short-term real estate financing</td>
</tr>
<tr>
<td><strong>Takeout</strong></td>
<td>No: characteristics of mortgages</td>
<td>Senior</td>
<td>Yes: long-term real estate financing</td>
</tr>
</tbody>
</table>
## Financial products: bonds

<table>
<thead>
<tr>
<th>Type</th>
<th>Debt recourse</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>General obligation bond</td>
<td>Full recourse to the issuer; therefore, same credit rating applies as to the issuer’s other bonds.</td>
<td>In the USA, three counties in the state of Virginia (Arlington, Fairfax, Loudoun, and Prince William) issued a general obligation bond to support the extension of a 23-mile Metrorail between Fairfax County and Loudoun County</td>
</tr>
<tr>
<td>Revenue bond</td>
<td>Revenue streams from the issuer, such as taxes or user fees, provide repayment for the bond.</td>
<td>In the Pearl District in Portland, Oregon, tax increment finance bonds were used to finance the Central City Streetcar, backed by property taxes on land value increments</td>
</tr>
<tr>
<td>Project bond</td>
<td>Recourse is only to the project’s assets and revenue.</td>
<td>In 2012, Mid-American Energy issued one of the earliest “green project bonds,” a 28-year bond to specifically finance the Topaz solar project, a 550 MW solar power plant in California</td>
</tr>
<tr>
<td>Securitized bond</td>
<td>Recourse is to a group of financial assets that have been grouped together as collateral.</td>
<td>The Hawaii State Government issued a Green Bond/ asset-backed security in November 2014 for loans to install distributed solar panels, connectors, and storage</td>
</tr>
</tbody>
</table>

Source: WRI, adapted from research based on Green City Bonds Coalition (2015)
De-risking products: products designed to lower the costs of finance by reducing the likelihood that an investor will not receive a return on investment. TOD products can access guarantees and insurance for de-risking purposes, which include:

- Credit guarantees
- Revenue guarantees
- Political risk insurance
The business model framework: A recap

- **Tangible Assets**
  - Equity
  - Debt
  - De-risking products

- **Intangible Assets**
  - Financial products
  - Delivery mechanisms

- **Processes**
  - Institutional frameworks
  - Legal entities & structures
  - Contracts
  - Funding sources
  - Investment incentives
  - Investment revenues
  - Own source revenue
Module Quiz

1. With the construction of a new metro line, Delhi government officials hope to improve accessibility and connectivity for residents. What type of investment component are accessibility and connectivity?
   a. Tangible assets
   b. Intangible assets
   c. Processes

2. Public-private partnerships can typically be categorized under what type of delivery mechanism?
   a. Implementation vehicle
   b. Transaction-level contract
   c. Institutional framework

3. TOD stakeholders in Tokyo, Japan use funds gained from land value capture to finance construction of a new railway station. Under the business model framework, under what element can land value capture be categorized?
   a. Financial products
   b. Funding sources
   c. Investment components
   d. Delivery mechanisms
4. At what stage of a TOD investment do stakeholders typically utilize the financial product of equity?
   a. Implementation stage
   b. Maintenance stage
   c. Pre-development stage
   d. Operation stage

5. To finance construction of transit-oriented affordable housing, TOD stakeholders in San Francisco, USA are able to access a loan with reduced interest rates and a flexible repayment schedule. What kind of loan have these TOD stakeholders utilized?
   a. Concessional loan
   b. Commercial loan