



# TRANSIT-ORIENTED DEVELOPMENT (TOD)

THE COMPLEXITY OF TOD DECODED

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Imagine there was a way to deliver high-quality modern housing with fantastic transport links whilst also reducing traffic congestion, urban sprawl and dangerous emissions. Now imagine that all of this was possible with reduced up-front government investment and that the project to develop these features could eventually be financially self-sufficient. Whether you are a government institution, a real-estate developer, project financier, construction contractor, a provider of rail infrastructure or simply a citizen, you might like to know how this is all possible.

Transit Oriented Development (TOD) is a way of developing, financing and delivering transport infrastructure projects. It has gained popularity – particularly in the Far East and parts of the United States – over the last 15 years. This popularity is set to soar as project owners and governments continue to search for novel ways of financing transport infrastructure developments.

## AN INTRODUCTION TO TOD

TOD is a planning and design concept that aims to integrate transport infrastructure with major urban development. By creating high-density, vibrant communities located directly adjacent to new transport hubs, local government, project owners and other project stakeholders can harness the social, environmental and economic benefits.

The TOD model works because of the proximity of the newly developed amenities, housing and retail connecting transport links which all boost the local economy. TODs can provide employers with access to a larger number of skilled workers within a narrower catchment area; retailers have a greater number of customers frequenting their shops and making purchases and transport operators have more customers paying for and using their services. When designed and implemented well, these schemes create vibrant communities and an increased demand for TOD housing follows, ultimately resulting in higher house prices within the TOD catchment area. This increased value can then be captured – often in the form of a tax – and used to pay back the initial project capital outlay and to finance the ongoing operations of the scheme.

The TOD model is not universally applicable. There are a limited number of scenarios in which it can work. However, the adoption of TOD has proliferated in recent times due to the potential for large-scale social and economic benefits. Iconic TOD schemes can be found in metropolises like Hong Kong, as well as smaller cities like Copenhagen and Stockholm.

## FEATURES OF TOD

No two TOD developments are the same, and each potential scheme must be considered on its own merit. However, there are six guiding principles to consider:

1. Create a walkable layout with the pedestrian considered the highest priority.
2. Ensure the transport hub (or hubs) are a prominent feature of the town centre and attract people; if possible, locate the public square directly adjacent to the station.
3. Look to include a mixture of different land uses in close proximity (office, residential, retail and civic).
4. Promote a high-density design in which most services are within a 10-minute walk of the transport hub; promote active transport. This may involve reducing and strictly managing parking within the 10-minute walk catchment area.
5. Install periphery and collector support transit systems like street-cars, buses and light-rail to support the primary transport hub.
6. Incorporate specialised commuter-friendly retail facilities – cafes, grocery and dry cleaners – within the stations.

## BENEFITS AND RISKS ASSOCIATED WITH TOD

### BENEFITS

#### STANDARD OF LIVING

Higher quality of life with better places to live, work and play

#### TRANSIT USAGE

Proximity of and access to stations leads to increased ridership

#### ENVIRONMENT

Greatly reduced dependence on oil reduced pollution and environmental damage

#### PROPERTY VALUES

Higher and more stable property values due to a concentration of resources and talent

#### ECONOMIC BENEFIT

Lower costs and higher revenues can support project financing, operations, and maintenance

#### RELATIVE COSTS

TODs are less expensive to build than other infrastructure (roads) and don't involve as much 'sprawl'

### RISKS

#### NON-ECONOMIC BENEFIT

A majority of the benefits associated with TOD are social; they are difficult to quantify and monetize

#### COMPLEXITY

Many TODs involve multiple projects from different industries - collaboration can be difficult

#### STAKEHOLDERS

TODs characteristically bring together a large and diverse set of stakeholders

#### LONG-TERM APPROACH

A strategic, long-term approach is required - TODs are more likely to succeed in mature markets

## FINANCING TOD PROJECTS

There are several factors to consider when creating a TOD financing strategy. The stakeholders, project conditions, geography and legislative framework of each scheme will differ and so will the structure of each deal. However, there are four broad categories project advisors should consider as they seek to create the financing strategy.

1. Direct fees (e.g. utility fees and congestion charges). These fees directly charge the public for using the infrastructure/goods and include:

- User charges
- Transportation utility fees
- Congestion charges

2. Private Financing tools are primarily used for the up-front funding rather than for the ongoing financing of the project and so are required at the beginning of the scheme, often in large amounts. Project financiers use a combination of debt and equity tools to secure the required level of capital. Public-Private Partnerships (PPPs) have grown in popularity as a project financing tool. PPPs generally involve both debt and equity and combine the capital, expertise and experience of the public sector with that of the private sector in creating better project outcomes. In addition to PPPs, there are many other private financing options open to TOD projects.

Debt tools:

- Private debt
- Bond financing
- Specialised debt for infrastructure

Equity tools:

- Public-Private Partnerships (PPP)
- Infrastructure Investment Funds

3. Value capture tools capture a portion of the value created or savings resulting from transport infrastructure. One source of potential revenue generation inherent in the TOD model is the increased value of residential property within the catchment area. As the scheme develops, the obvious benefits of living in the TOD catchment will increase demand and prices of residential property. Value capture tools attempt to realise that value and re-invest it back into the scheme. Some examples of value capture tools include:

- Developer fees and exactions
- Special districts
- Tax increment financing
- Joint development

4. New /Alternative tools, in addition to the established tools discussed above, several new approaches to securing finance for TOD schemes are emerging. These include:

- Structured funds – A dedicated, professionally managed fund that pools together investors from different backgrounds with varying risk and return profiles
- Redfields to Greenfields – The concept of converting underused or distressed property into assets e.g. local government purchases underused or disused buildings in the local vicinity (Redfields), demolishes them to create a new park (Greenfields)
- A national infrastructure bank – Many countries are now establishing national (or state) infrastructure banks that provide local governments with low-interest loans dedicated to the financing of transportation and other types of infrastructure development

## TOD BEST PRACTICE

Given the clear benefits but potential complexity of financing, planning and delivering an effective TOD project, there are nine best practices to consider when developing a strategy and approach. A good TOD financing strategy will include the following elements:

1. A long-term and wide-ranging vision for the TOD area that is agile enough to respond as the market changes and funding options evolve. Assiduous and pro-active monitoring of market conditions can allow local governments to take advantage of new opportunities as and when they emerge.
2. Strategic prioritisation of public investments and public funds. It is important to establish credibility in the public sector first in order to attract private interest and alternative sources of capital.
3. A detailed and objective assessment of the local real estate market context – with accompanying insights.
4. A list of key infrastructure needs and associated costs supported by data and professional subject-matter expertise.
5. A phasing plan that sequences the infrastructure development, financing tranches and revenue collection according to the specific needs of the project.
6. A broad funding and revenue generation base to both increase the quantum of available funds and to stabilise the revenue stream – both factors can help secure more favourable lending terms.
7. Synergies among infrastructure projects. Developing related projects as part of a larger programme or portfolio of activities can benefit end-users, developers, contractors, funders and owners alike.
8. Clarification and delineation of roles between public sector agencies and the various different private sector entities.
9. Comprehensive assessment of potential funding sources and how they are (or can be) tailored to suit the project-specific infrastructure needs, geographical, political and market conditions, and the capabilities of those delivering the project.



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## SUMMARY

In the right environment, the TOD model offers project owners, developers and governments an opportunity to deliver modern world-class infrastructure in a more integrated and cost-effective manner. In order to make TODs work, various stakeholders must commit to a collaborative working relationship through every stage of what will be a complex process. They must also retain a strategic long-term view in the face of inevitable short-term challenges. Finally, in light of the scale and complexity of commercial agreements underpinning the model, they must be able to rely on a robust and mature legislative framework. For this reason, the TOD model is not for everyone – but as more schemes are successful, TOD as a means of efficiently developing infrastructure looks set to grow.

## ABOUT THE AUTHOR

**Chuks Nwabine** is an advanced Programme Management Practitioner with a 10-year track record of successfully planning and executing in complex delivery environments. He has been involved in the delivery of projects with a combined CAPEX of over US\$10.2bn and has operated in a variety of programme and project roles with a varied range of clients throughout Europe and the Middle East.

He is a PMP® Chartered Program Management Expert with a track record of accomplishment in infrastructure, construction and I.T. enabled change programme. With qualifications in a wide range of delivery methodologies including Agile, PMI and MSP®, Chuks is able to combine this comprehensive theoretical knowledge with practical hands-on experience when helping clients navigate through complexity and successfully delivering expected outcomes.