The 3V Framework

Maximizing Economic Value of TOD Station Areas

Third TOD Knowledge Sharing Seminar

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The World Bank
Transformational Opportunities
Tokyo urban form

Compact polycentricity connecting people to people across many scales (including HSR) along the Yamanote loop

Source: Erik Fischer
The Spiky Urban Economy of Global Cities

London
Peak 141,600 jobs/km²

New York
Peak 151,600 jobs/km²

Hong Kong
Peak 120,200 jobs/km²

Visualisation by Duncan A Smith for LSE Cities
London’s Jobs hierarchy exponent minus 1, (minus 0.7 for population like in systems of cities in economic geography); one third of jobs, 1.5 million jobs, in 16 km² in London

Source: Urban Morphology Institute.
Subway networks converge towards a characteristic structure with a dense and interconnected core and with spoke.

Source: QuantUrb, CASA
Need for a Typology

- Identify development potential (scale, type, timing) based on market demand, social and environmental priorities
- Develop planning and implementation measures and prioritize limited public resources
- Communicate with private developers a vision for the city

Source: World Bank; Serge Salat and Gerald Ollivier, 3V Framework (2016)
The “3V Framework”

- Node Value based on its location in the network
- Place Value based on its urban qualities
- Market Value, based on its economic potential
Source: Urban Morphology Institute/World Bank 3V Framework Application to Zhengzhou, China
Node Value (London Tube)

- Hub, Interchange, Single station
- Diversity of connectivity
- Node Accessibility/Centrality
- Intensity of node activity

Source: Urban Morphology Institute
Place Value

- Mix of land uses
- Density of social infrastructure
- Compactness
- Physical form and street patterns
- Walkability and bikability

Source: Urban Morphology Institute
Market Value

- Economic attractiveness for developers (job densities/accessibility; People density)
- Land and real estate opportunities (FAR/unbuilt land)
- Market prices and activity
- Land shortage at city level

Source: World Bank; Serge Salat and Gerald Ollivier, 3V Framework (2016)
SubIndex Human Density 2009
SubIndex Job Housing Ratio 2009
SubIndex Human Density Growth Potential 2009-2030

Market value index
Overall Strategies (1)

• **Infill** is mainly for dependent nodes in suburban neighborhoods with single transit lines and low value market. The strategy there is to:
  – Promote long term planning
  – Increase activity levels and transit service through increased densities
  – Plan and fund multimodal transportation system
  – Plan for maintaining equity in vulnerable or challenged communities

• **Intensification** is for emerging station areas in urban neighborhoods with interchanges and emerging markets. The strategy there is to:
  – Invest in catalytic TOD projects to prime and push the market
  – Promote development oriented planning
  – Evaluate and address missing multimodal connections and accessibility
Overall Strategies (2)

- **Transformation** is the strategy to be applied in major hubs where creating a high level of place value through job concentration and good urban design with major investments in public spaces can create high peaks of land and real estate value.

  - Invest in aggressive TOD projects to push the market
  - Significantly higher densities and lower parking ratios
  - Innovative building types and advancements in urban design & living, employment uses and destination
  - Encourage affordable or work force housing
  - Foster increased transit service, capacity and amenities to support intensity of uses
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<thead>
<tr>
<th>Node Value</th>
<th>Place Value</th>
<th>Market Value</th>
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<tbody>
<tr>
<td>• Increase number of hubs and number of lines/modes they connect to</td>
<td>• Increase compactness (proximity to existing urban activity and short travel time to main destinations)</td>
<td>• Increase residential density</td>
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<td>• Interlink neighboring stations into clusters</td>
<td>• Increase diversity of uses</td>
<td>• Increase job density</td>
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<tr>
<td>• Increase accessibility within the network for all</td>
<td>• Increase concentration of commercial, cultural and education amenities</td>
<td>• Increase human density</td>
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<td>• Design neighborhood that promote walking and biking</td>
<td>• Increase diversity of land parcels to create a vibrant land market</td>
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<td>• Create vibrant public realm</td>
<td>• Allow for vertical separation of development rights</td>
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<td>• Increase FARs</td>
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Zhengzhou Key Conclusions
Key Messages

• Apply TOD to shape a city
  – Get commuters to and from work efficiently
  – Cluster companies in accessible areas

• Opportunities by station vary widely

• Alignment opportunities can be readily observed

• Typology central to creating value
Transit Oriented Development
Community of Practice Website
now OPEN to External Members by Registration

https://collaboration.worldbank.org/groups/tod-cop

For more gollivier@worldbank.org
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<thead>
<tr>
<th>Number</th>
<th>Principle</th>
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<tr>
<td>1</td>
<td>Align Human/Economic Densities and Mass Transit Capacity and Network Characteristics for Greater Accessibility</td>
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<tr>
<td>2</td>
<td>Create Compact Regions with Short Commutes</td>
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<td>3</td>
<td>Ensure Resilience of Areas Connected by Mass Transit</td>
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<td>4</td>
<td>Plan and Zone for Mixed Use and Mixed Income Neighborhoods at Stations along Corridor</td>
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<td>5</td>
<td>Create Vibrant, People-Centric Public Spaces</td>
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<tr>
<td>6</td>
<td>Develop Neighborhoods that Promote Walking and Biking</td>
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<tr>
<td>7</td>
<td>Develop Good Quality, Accessible and Integrated Public Transit</td>
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<td>8</td>
<td>Manage Private Vehicle Demand</td>
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