Applying innovation systems and services, developing strategies and creating a sense of local identity in the XinZhuang District, New Taipei City

A research project of the EcoCity Lab of the National Chiao Tung (NCTU) University at Hsinchu

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Smart Development Corridor

from Hsinshu to Keelung via Taoyuan, New Taipei City and Taipei City

an example of "Responsible Urbanism"
TOD basic principles

- Transit becomes the organizing principle for development
- Transit changes market dynamics by providing new access
- TOD integrates both regional and local contexts; Corridors become the network of regions
- Corridor planning presents the opportunity to engage a wide range of stakeholders early in the process
- Corridor planning is effective when it involves planning for each station along the corridor as well as the role they play within the regional network; it prioritizes high-potential station areas for development and investment
Corridor development principles

• Reposition the metropolitan area in the region
• Benefit and strengthen the diverse communities along the corridor
• Link and foster economic activity
• Improve people’s mobility throughout their community
• Improve the image and quality of life along the corridor
• Collaborate from design to operation
East Asian urban corridors
TOD basic principles

• All scales of planning for TOD are important
  – People within a half-mile radius are 5 times as likely to walk to a major transit stop than others.
  – Those living further from a transit node are less likely to bother with the train or bus.
  – TOD also applies at site, station, corridor and regional scales
US Eastern Board

690 km, 3 ½ hours by fast train at 355 km/h, 120 billions US$
Greater Paris
the region as a network of corridors
205 km of metro lines and 72 new stations
Greater Paris
the region as a network of corridors

• 200 / 250 km of tracks
• 72 new stations
• 5600 / 6000 plots of land to acquire at a reasonable price
• A special development body - the SGP responsible for the new metropolitan lines (infrastructure, tracks, rolling stock, stations)
• Real estate – residential (70 000 per year) and office sale as source of funding plus State contribution
• Authority to develop around the stations in a radius of 400 m if no agreement of the municipality
• To curb speculation agreements are signed between the State and grouping of municipalities (CDT) on development programmes of 19 strategic areas around the stations
Miaoli – Hsinchu – Taoyuan – New Taipei City – Taipei City

A Polycentric Corridor
St Paul - Minneapolis corridor
Central Corridor Development Strategy

• A vision and set of strategies for how the agglomeration should grow and change over the next 25-30 years in response to the planned investment in new transit system.

• Central Corridor represents an opportunity and challenge:
  – If the community takes full advantage of plans to construct the new transit system the result will be stronger businesses, more vibrant neighborhoods, and a more beautiful urban place.
Central Corridor Development Strategy

the vision

• Corridor invites residents, shoppers, employees and visitors to
  – linger on safe, pedestrian-friendly, attractive, tree-lined boulevards;
  – establish a home and sense of community in stable and diverse neighborhoods;
  – works and invest in an area that provides a range of employment and economic opportunities.

• Central Corridor builds on its assets to become a place that has stronger businesses, more vibrant neighborhoods, and more beautiful urban places.
15 km corridor
connecting University, shopping and industrial districts, and central area
The Strategy defines several development types illustrating ways of organising space that could respond to the range of distinct site characteristics along the corridor.
Public space and places

• Streets, parks and squares are the civic glue of cities.

• They are the places that become enriched with distinctive heritage and culture;

• They are the gathering zones for meetings;

• They become the front and side doors that frame development and make the transit experience expedient and enjoyable.
Public space and places
Today's situation
Adding smart transport system
New building along the corridor
Framing the street
The impact of the TOD

Before and after
TOD: rail + property – not enough!

• The MRT in Hong Kong has been associated with the rail + property model leading to being one of the few profitable transport operators.
• In Hong Kong high density residential development around train stations led to the increased use of the public transport system thus reducing the use of the private car
• It is not just density and sale of residential units that drove the success; it is also the retention of key retail and commercial sites around the station that bring in revenue to help finance ongoing operational expenses
Funding mechanisms

• In 2010 the San Francisco region developed the Bay Area Transit-Oriented Affordable Housing Fund, a revolving loan fund to finance the acquisition of sites near transit for affordable housing.

• This fund was created by the Great Communities Collaborative, a partnership of nonprofit organizations and regional foundations, and managed by a consortium of community development financial institutions.

• The San Francisco Bay Area’s Metropolitan Transportation Commission committed $10 million to launch the fund on the condition that money would only be spent in areas designated for growth in the region’s long-range development and land conservation strategy.

• Affordable housing developers can apply for funding for projects that improve access to transit and housing for low-income residents.
FOCUS is led by the Association of Bay Area Governments, the Metropolitan Transportation Commission, the Bay Area Air Quality Management District, and the Bay Conservation and Development Commission.
TOD hampered by outmoded land-use policies

• US cities recognize that suburban development – large homes on large properties, separated from offices and shopping – contributes to long commutes, heavy traffic, destruction of habitat and open space and high costs for quality housing

• Only 46% of Connecticut communities with Metro-North rail service have land use regulations to maximize access to transit and foster economic growth through TOD. Outmoded policies undermine the efforts. Only 20% of Metro-North station neighbourhoods had parking requirements that reflect walkability and transit use
TOD hampered by outmoded land-use policies

• Only half of station areas allow densities that encourage a mix of homes, shops and services within walking distance of transit. Other stations are surrounded by large-lot, single-family houses, discouraging transit use, contributing to longer commutes and traffic congestion and reducing open space.

• Improving development around transit hubs reduces dependence on cars and curbs pollution, allows for a mix of housing types and makes efficient use of land.

• Companies located in transit-served, mixed-use centers attract more highly skilled employees. And both young people and retirees are drawn to walkable neighbourhoods with easy access to shops and services.
Regional TOD planning

• Plan for the plan
• Get to know your region
• Invest in capacity building, education and technical assistance
• Develop a regional vision for TOD
• Identify a strategy for prioritizing and phasing investments
• Create incentives for local action
• Provide funding for implementation
• Measure and evaluate progress
謝謝
Thank You