PAST, PRESENT, AND FUTURE OF **TRANSIT-ORIENTED DEVELOPMENT** IN EUROPEAN CITY-REGIONS

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CASUAL

Co-creating Attractive and
Sustainable Urban Areas and Lifestyles

Project Facts

Client
Formas / Joint Programming Initiative Urban Europe

Lead Partner
Nordregio

Partners
Austrian Institute for Spatial Planning (ÖIR)

TU Delft

Local partner
Färgfabriken

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What is **Transit Oriented Development** (TOD)?

in a nutshell

Development that is oriented towards mass transit facilities

- usually rail, but also Bus Rapid Transit (BRT) and ferry
- “transit” is the key word – not to be confused with “transport” (i.e. roads or highways)

Brief history

- Three types of settlements:

1. The walking city
2. The transit city
3. The automobile city
4. TOD based city

Term **TOD** coined by
Peter Calthorpe in
The Next American Metropolis
(1993)

Two main TOD types

1. Node TOD

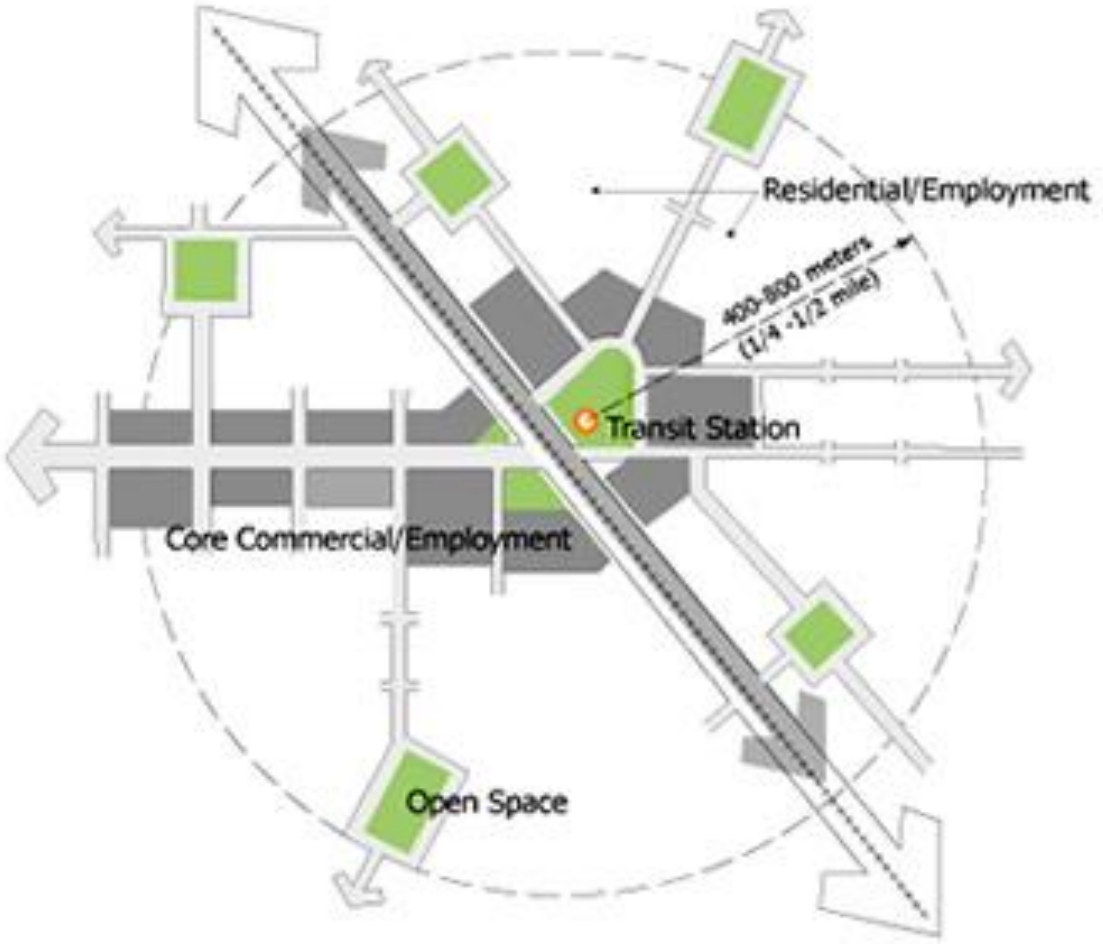
   - Heavy rail – based (R-TOD)
   - Urban or suburban
   - Single node or multi node

2. Corridor TOD

   - Light rail – based (R-TOD)
   - BRT based (B-TOD)
   - Ferry based (FOD)
   - Urban

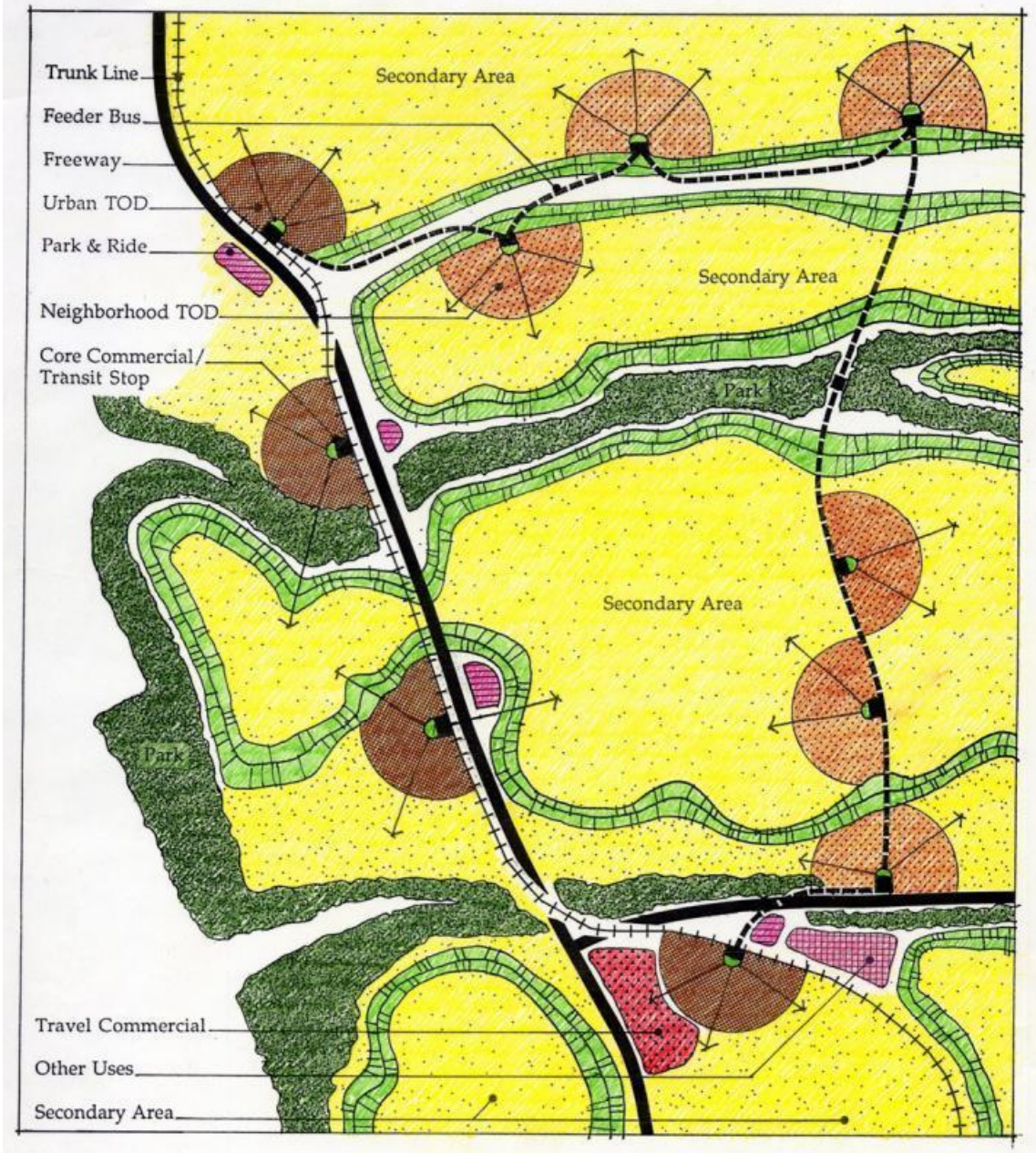
Single Node TOD

- Development takes place within a circle centered on a train station
- Circular pattern
- Radius varies from 0.5 km in the US (pedestrian access) to 2-3 km in the Netherlands (bicycle access)
- Applicable in urban or suburban areas



Multi Node TOD

- Same as single node TOD but it reaches further than a single location to create a network of nodes
- Beads-in-a-string pattern
- Applicable to a region



Corridor TOD

- Linear development along a transit line with frequent stops
- Solid pattern because the nodes (i.e. tram or BRT or ferry stops) are near each other
- Applicable to an urban area (e.g. for finger-like urban extension)

Characteristics

High quality urban design

Average to high densities (not necessarily high-rise)

Pedestrian- and cyclist-friendly environment

Easy access of transit facilities

TOD: The origin & evolution?

Europe > US > Europe

- Three case studies
  1. Austria (Vienna) – Central Europe
  2. Netherlands (Amsterdam) – Western Eurpe
  3. Sweden (Stockholm) – Northern Europe

- Timeline
  - Post-WWII – present

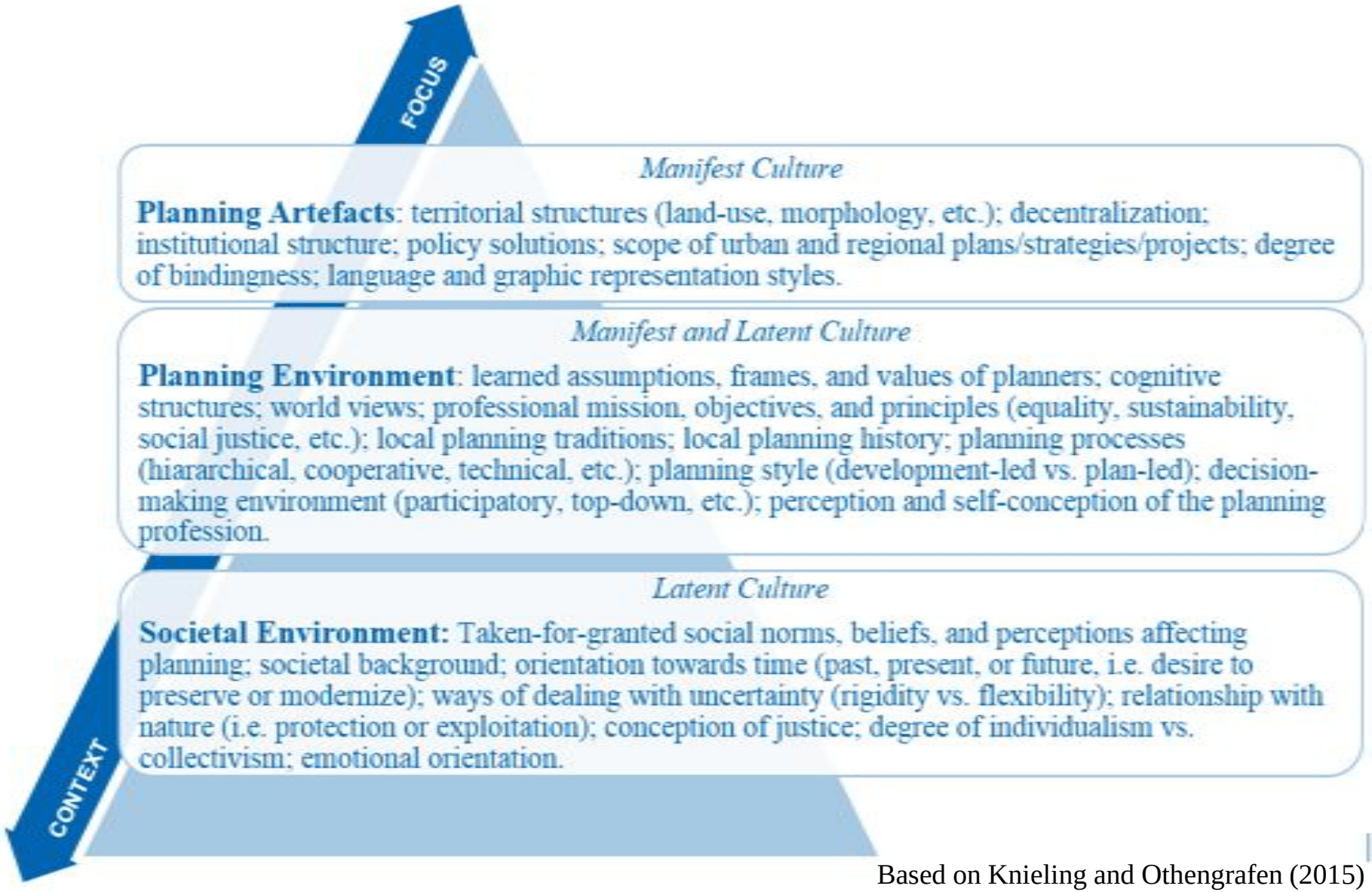
- Method
  - Secondary data (policy reports, books, articles, etc.)

Outputs:

- CASUAL project **Working Paper no. 5**
- Article under review in ***Land Use Policy***

Theoretical framework:

The "culturized Planning model"



Based on Knieling and Othengrafen (2015)

Postwar Spatial Planning Policy

in Austria, the Netherlands, and Sweden

- 1950s: Major focus on housing reconstruction (Netherlands and Austria)
- 1960s: Infrastructure development – both roads and rail
- 1970s: Creation of new suburbs and towns (Sweden and Netherlands)
- 1980s onwards: re-urbanization trends | urban revitalization
- 1990s: rise of neoliberalism
- Planning has acquired a bad name!

Postwar TOD Policy and Practice

in Vienna, Amsterdam, and Stockholm

General trends

- 1950s-1970s: The suburban TOD era
- Urban expansion
  - Vienna: classic ring-radial growth
  - Amsterdam: lobe city
  - Stockholm: star shape
- Housing transit construction proceed more or less in parallel
- 1980s-onwards: The urban TOD era
- Infill, brownfield development in areas served by transit

Let's review a few recent and representative examples from each city

Vienna

- Seestadt Aspern, a TOD area still under development
  - New urban centre in the east of Vienna
  - Multifunctional district with a mix of residential, office, scientific, research and educational uses
  - In 2028, 240 hectares of developed land, 20,000 residents and a similar number of workplaces
  - Integrated mobility strategy for incoming residents (prioritising walking, cycling and public transport)
  - Connected to the public transport network of Vienna and the wider metropolitan region through metro, light rail and heavy rail, tram and bus network
  - Aim of maximising the attractiveness of streets and public spaces
  - Broad choice of shops, restaurants and other services are provided
  - The highest densities around the two metro stations

Amsterdam

- Zuidas district, a TOD centred on the South Station
  - Success has been ascribed to the availability of large amounts of office space, a concentration of prestigious law firms, the proximity to the Schiphol airport, an international allure, and excellent accessibility by car (including the necessary parking facilities)
  - The general quality of the local urban environment is currently rather mediocre
  - Largely mono-functional and dominated by high-rise office buildings

- Ambitious plans
  - putting the railway and highway infrastructure underground
  - providing additional space for new housing, open space and green transport modes (cycling and walking)
  - transformation into to a fully-fledged urban centre, incorporating a balanced mix

Stockholm

- Regional urban core of Flemingsberg
  - almost 20 km south of the centre
  - area now characterised by scattered multi-storey housing, a research park, a university and university hospital, a regional court and a police station
  - current plan to densify the area with new apartments, shopping and leisure facilities, and additional office space
  - proposed transport infrastructure projects: a tramline connecting Flemingsberg with the southern western suburbs of Stockholm and a high-speed rail line (the East Link Project), connecting Stockholm with Linköping and Södertälje

Conclusion

- TOD has clearly originated in Europe
- The history of TOD goes back at least seven decades
- Intrinsic part of planning since WWII
- The current TOD reincarnation is more focused on urban design
- Planning has been crucial in making TOD happen
- The current loss of reputation of the planning profession makes the future of TOD uncertain

Lessons for practitioners

- Transit-oriented development (TOD) does not occur naturally and governments play a major role in steering development towards transit stations and lines – or in servicing existing housing developments with public transport
- TOD is context dependent
- Efforts to promote TOD in brownfield urban areas are important given the trend toward a return to the city and ideas of "green urbanism"
- It is also important to support the development of new centres at the edge or outside larger cities as integral parts of regional polycentric strategies
- Different types of TOD can be employed in parallel: nodal TOD, regional network TOD, and urban corridor TOD

Thank you!

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