Transit-oriented development (TOD), a recent approach in Iranian planning system to integrate railway station and the city
the case study of Qazvin Railway Station Area

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History of rail and the city

Omnibus
- horse-drawn carriage that ran along a fixed route
- 1827 - 1907

Horsecar
- horse-drawn streetcar that ran on tracks
- 1832 - 1917

Elevated train
- train that ran on above-ground tracks
- 1869 - 1973

Cable car
- streetcar operated by underground steam-driven cable conduits
- 1883 - 1909

The garden city movement: 1898 by Sir Ebenezer Howard

linear city (1882): Arturo Soria y Mata

Fig. J. Ebenezer Howard, Garden-City. Grand Avenue, 1902, in Garden Cities of To-morrow.
What is TOD?

T.O.D.
- Transit
- Mixed Use
- Walking Distance
- Affordable Housing

Walk
Develop neighborhoods that promote walking

Cycle
Prioritize non-motorized transport networks

Connect
Create dense networks of streets and paths

Transit
Locate development near high-quality public transport

Mix
Plan for mixed use (e.g., commercial and residential)

Densify
Optimize density and transit capacity

Compact
Create regions with short commutes

Shift
Regulate parking and road use to increase mobility

What is TOD?

A transit-oriented development (TOD) is a mixed-use community within an average 2000 foot walking distance of a transit stop and core commercial area. TODs mix residential, retail, office, open space, and public uses in a walkable environment, making it convenient for residents and employees to travel by transit, bicycle, foot, or car.
Different TOD levels

An example of 4 levels of TOD planning from transit corridors at regional level to promoting compact mixed use development at site level-Source: IBI Group
TOD and railway station area: Berlin Central Station

Source: Dr. Friedemann Kunst
TOD and railway station area: Berlin

Berlin-attractive public transport system

- New carriages, extension of network, barrier-free access extend capacities, raise attractiveness

Source: Dr. Friedemann Kunst
TOD and railway station area: Berlin

- Central Station at crossing of diameter lines, additional (minor) stations,
- more centralized urban development

- Construction of new north-South-Diameter line and central railway-station at crossing point, 2006 completed
- development of central station as local transport hub (350,000 daily users)
- development of new urban quarters around the station (former border land close to wall)
TOD and railway station area-example: Berlin

Source: Dr. Friedemann Kunst
Iranian planning system

Ministry of Roads and Urban Development

Urban planning and Architecture Department

- Urban Monitoring affairs bureau
- Architecture and Urban Space Bureau
- Urban and County Planning Bureau
- High Council Architecture And Urban Development Bureau
Iranian planning system-urban planning documents

Architectural Plans
- Detailed Plans

City Development Plans
- Urban Comprehensive Development Plans
  - Detailed Plans

National and Regional Plans
- National Physical Plans
- Sub-National and Regional Development Plans
- Regional and Provincial Development Plans
- Metropolitan Area Plans
Development of national TOD guideline

Ministry of Road and Urban Development

- Vice-Presidency of Urban Development and Architecture
  - High Council of Urban Development and Architecture
    - Technical Committees
  - Officially responsible for technical review and approval

- Vice- Presidency of Transportation
  - High Council of Transit
    - Officially responsible for TOD guideline preparation

- Road, Housing and Urban Development Research Center (BHRC)
  - Scientific support, training courses and capacity building
Case study: Qazvin

Connection of the city to the national railway: 1939
Source: Iran National Cartographic Center
Case study: Qazvin

Connection of the city to the national railway established on 1939
Source: Iran National Cartographic Center
Case study: Qazvin

Railway station: 1994
Source: Iran National Cartographic Center

Source: Pardaraz Consulting Engineers
Case study: Qazvin

Source: Qazvin city Atlas, Rafieian et.al, 2012
Case study: Qazvin

Qazvin central railway station

Source: Fatemeh Sharifi
Case study: Qazvin

Qazvin central railway station

Source: Mahta Mirmoghtadaee
# Case study: Qazvin

## Projects developed in Qazvin with TOD approach

<table>
<thead>
<tr>
<th>Project title</th>
<th>Prepared by</th>
<th>Funded by</th>
<th>TOD theme</th>
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</thead>
<tbody>
<tr>
<td>1-Qazvin TOD studies</td>
<td>Atieh Saz Consulting engineers</td>
<td>Road and Urban Development Organization of Qazvin</td>
<td>To develop public transportation corridors to connect railway station and the city</td>
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<tr>
<td>2-Regeneration of Railway Neighborhood with TOD approach</td>
<td>Naghsh-e-Paydar Consulting engineers</td>
<td></td>
<td>Station area as an urban catalyst to support urban regeneration</td>
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<tr>
<td>3-Comprehensive railway station area plan with TOD approach</td>
<td>Heram Pey Consulting engineers</td>
<td>Railways of Islamic Republic of Iran</td>
<td>To create vibrant urban environment in the station area</td>
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### Project outcomes:

1. A priority corridor has been defined, connecting the railway station to the city.

2. Through an participatory approach, urban regeneration plan has been developed.

3. With the focus on TOD approach, station area development plan has been developed.
Conclusion

• TOD as the main national policy to integrate city and the railway station
• Definition of study projects according to special situation of each city and its connection to the railway station
• Considering an holistic approach to integrate study projects
• The need for regeneration of urban areas (generally poor quality neighborhoods) with the focus on the station as an urban catalyst
• Location of new railway station with good connection to the city
Thank you
for your kind attention

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