Railway Stations as Drivers for Sustainable Spatial Development

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Overview

1 Strategies
2 Cases
3 Conclusions
Strategies

1. Inward Development before Outward Development is the main Spatial Strategy

2. Railways are the Strategical Backbone of a sustainable Network of Cities and Locations

2. Railway Stations are the Cristallisation Points of Inward Development (Urban Density)
Cases

1. Switzerland and Zurich as the main Railway hub
2. European Corridors: As example Rhine Alpine and Orient/East Med Corridor
3. Frankfurt, Berlin and Vienna
Switzerland
**Iran**

Population: 82 Mio.; 50 P/ha

**Switzerland**

Population: 8.6 Mio.; 212 P/ha

Reference: http://www.bfs.admin.ch | access August 2010 | TF, IRL, ETH Zurich
Effective growth rate of last 10 years 0.9% 

\[ \approx 8.6 \text{ Mio.} \]

(per Dec. 2018)
Challenge: Topographie
Metropolitan areas of Switzerland

Zurich: 1.6 mio.
Geneva-Lausanne: 1.2 mio.
Basel: 0.7 mio.
Bern: 0.6 mio.
Ticino: 0.5 mio.
Main National Spatial Strategy: Network of Cities and Locations, Railway System is the strategical backbone, Dense frequency of longdistance, regional trains and urban public transport system
Main Railway Hub Zurich: Dead End Station and two Through Stations, step by step
New Underground Railway Station

„Löwenstrasse“
Additional Capacity with New Underground Railway Station Zurich
Additional Capacity with New Underground Railway Station Zurich
Existing Extension (Flügelbahnhof) usable for housing and office space.

Railway Station 2016

Europaallee 2017
Investments to the Train System Zurich 1.6 Billion CHF
Railway Stations as Crystallization Points for Inward Development

Main Railway Station Zürich, 450,000 passengers daily
European Railway Corridors_ Integrated Spatial and Railway Development
Cases: Rhine Alpine Corridor and Orient/East Med Corridor
Railway Stations as Crystallization Points for Inward Development: Land Reserves in the Catchment Areas of Railway Stations of the Rhine Alpine Corridor

150,000 ha land reserves for ca. additional 7 Mio. inhabitants in the corridor is available

Source: Braun, C. (2013) IRL, ETHZ

EUROPEAN TEN-T CORE NETWORK CORRIDORS

Frankfurt, Development Marshalling yard

Zürich, Development Central Station
Berlin | Central Station & Governmental Area

"Central station"

Construction on the traditional site for the new future of the city
New Central Station Berlin

Area Size

60 ha
‘EuropaCity’: Mixed-use quartier for the improvement of urban life
Reorganisation of Railway Stations in Vienna and Transformation of Catchment Areas

Source: ÖBB, Poimer, ETH Zürich, Porta Symposium 2013
Railway Stations as Crystallization Points for Inward Development

New Central Station Vienna

Situation before, 2 Stations and Freight Station

Source: ÖBB, Stratil-Sauer, ETH Zürich 2013
Railway Stations as Crystallization Points for Inward Development

New Central Station Vienna
Conclusions

1. Demand for sustainable Mobility: Investment in Railway is a strategic Driver for urban
2. Increase of Accessibility creates added values for public and private
3. Railway and City Development: Two Sides of the coin and Win – Win - Situation

Reduction of Travel Time Zurich- Milano from 11 to 3 hours

Gotthard Base Tunnel

Ceneri Base Tunnel Opening
Thank you for your attention