EcoMobility Days 2016
16-20 October 2016, Quito, Ecuador
Torben Heinemann is the head of the office for Traffic Planning and Road construction in the City of Leipzig, Germany.

In his position he has led various sustainable transportation achievements in the city. The development of strong, pedestrian-friendly city center and pro-public transport development are a few examples.

Leipzig, due to its people friendly developments, won the German National Award for Sustainable Cities in 2012 for its quality of life and urban structure. The City also hosted the OECD’s 2015 International Transport Forum.

Leipzig is also an EcoMobility Alliance member city and under the leadership of Torben the city delegation has recently participated in a EU commissioned project called the World Cities project where the city shared experiences and learnt from its partner city, Kumamoto, Japan.
Sustainable Mobility – made in Leipzig

Leipzig, 17.10.2016

Dipl.-Ing. Torben Heinemann
City of Leipzig
Office for Traffic Planning and Road Construction
Leipzig - city of culture

- working site of Johann Sebastian Bach
- home of the world famous Thomaner Chior
- a place for modern art and architecture
Leipzig trade fair international

- investment: 800 Million €
- start planning: 1992
- opening: 1996
- visitors per year: 1.4 Million
Leipzig – numbers and facts

inhabitants 585,000
(in 2011 plus ca. 9,000 people
in 2012 plus ca. 10,000 p.
in 2013 plus ca. 11,000 p. plus 2.06 %
in 2014 plus ca. 13,000 p. plus 2.12 %
in 2015 plus ca. 16,000 p. plus 2.90 %)

area 29,760 ha

road network 1,777 km

tram network 148 km

tram lines 13

bicycle network 444 km
Leipzig: A growing City

- new population about 60,000 over the past 5 years
- more than 95% of inhabitants enjoy living in Leipzig
- particularly attractive to young people
- registered employees in 2011: 216,189

Source: Statistisches Landesamt Sachsen
Leipzig city structure

North: New fields of employment

South: Leipziger Neuseenland
Espenhain, 1980’s
Espenhain, 1980's
Leipzig, 1992
Leipzig, 1990’s
Principles of sustainability

Leipzig won the national German price for sustainability for the criteria:
- quality of life and
- structure of the city
Expected Modal Split in Leipzig for 2020

<table>
<thead>
<tr>
<th>Year</th>
<th>By public transport</th>
<th>By car, go with</th>
<th>By Car</th>
<th>By bicycle</th>
<th>By foot</th>
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<tbody>
<tr>
<td>1987</td>
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<td>5.9</td>
<td>17.8</td>
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<td>8.7</td>
<td>23.2</td>
<td>5.8</td>
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<td>5.8</td>
<td>38.2</td>
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<td>8.7</td>
<td>27.3</td>
<td>13.2</td>
<td>31.5</td>
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<td>2003</td>
<td>17.3</td>
<td>9.9</td>
<td>34.1</td>
<td>12.4</td>
<td>26.3</td>
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<tr>
<td>2008</td>
<td>18.8</td>
<td>11.0</td>
<td>28.6</td>
<td>14.4</td>
<td>27.3</td>
</tr>
<tr>
<td>2020</td>
<td>23.0</td>
<td>9.0</td>
<td>25.0</td>
<td>18.0</td>
<td>25.0</td>
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New goals for the Modal Split 2025

Modal Split

<table>
<thead>
<tr>
<th></th>
<th>MIV</th>
<th>ÖV</th>
<th>Rad</th>
<th>Fuß</th>
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<tbody>
<tr>
<td>SrV 2003</td>
<td>26,3%</td>
<td>12,4%</td>
<td>17,3%</td>
<td>44,0%</td>
</tr>
<tr>
<td>SrV 2008</td>
<td>27,3%</td>
<td>14,4%</td>
<td>18,8%</td>
<td>39,6%</td>
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<tr>
<td>Ziel 2015</td>
<td>28,0%</td>
<td>17,0%</td>
<td>23,0%</td>
<td>32,0%</td>
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<tr>
<td>Ziel 2025</td>
<td>27,0%</td>
<td>20,0%</td>
<td>23,0%</td>
<td>30,0%</td>
</tr>
</tbody>
</table>

- SrV = Survey of travel behaviour of TU Dresden for the City of Leipzig every 5 years
- Ziel 2015 according to STEP 2003
- Ziel 2025 according to STEP 2015 (draft version)
Leipzig – compact city center
Leipzig - downtown

ca. 900 m

ca. 700 m
City-centre – limited access for cars
Passages in the city

There are more than 30 covered walkways
City Centre – strengthening functional mix
Car reduced city center
Parking in the city center:

- **5,900** parking places in public parking garages underground and above ground.
- **10,400** parking places totally in the inner city.
Parking in the city center

- Raising the parking fee by 200% in 2011, new: 2,- €/h
- Reduction parking lots on street in the city center from 870 to 225 in 10 years
Revitalizing public spaces: Richard-Wagner-Platz
a former parking lot for 120 cars

Foto: punktum Bertram Kober
Why support walking?

- The desire to spend time in public spaces is a sign of urban quality – spaces without people are vast and empty.
- The presence of people brings social security.
- Walking is healthy and leads to well-being.
- Walking gives urban quality.
- Spaces for pedestrians are attractive for tourists.
Why support walking?

- for an attractive public transport there is a need for an attractive net for walking
- ecological mode of transport
  → walking does not cause any environmental
- economical aspects
  → cost for infrastructure are much smaller than for any other form of transport
- supporting walking increases the possibilities for handycapped people to be independently mobile
  → walking is not discriminating age or sex
- attractive public spaces
- attractive situation for local economies

Am Markt

Photo: Andreas Schmitz
Belance the conflicts between pedestrians and cyclists
pedestrian zone in Leipzig
Karl-Liebknecht-Straße in Leipzig – new built
Karl-Liebknecht-Straße in Leipzig – new built
Karl-Liebknecht-Straße in Leipzig – new built (details)
Leipziger Hauptbahnhof – main train station

Source: Freistaat Sachsen
history - local and regional rail service

1. Line (1968)
- Plagwitz-Gaschwitz (2002 stopped)
- Grünau (1977-84)
- Wurzen (1974)

New City-Tunnel (2013)

2004 Plagwitz-Grünau

Office for Traffic Planning and Road Construction
The new local and regional rail service

- Halle – Flughafen - Altenburg
- Halle – Stötteritz - Wurzen
- Grünau – Stötteritz - Wurzen
- Bitterfeld - Gaschwitz
- Borna - Eilenburg
Main station
Market station
More than 80% of public transport in Leipzig by trams
The tram improvement program

1. Line 11 (1999 – 2025)
3. Line 7 (2010 – 2020)

Office for Traffic Planning and Road Construction
Leipzig – one of the oldest tram networks in the world

<table>
<thead>
<tr>
<th>Top</th>
<th>City</th>
<th>Year</th>
<th>km</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>New Orleans</td>
<td>13.01.1835</td>
<td>40.6</td>
</tr>
<tr>
<td>2</td>
<td>Boston</td>
<td>26.03.1856</td>
<td>40.6</td>
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<tr>
<td>3</td>
<td>Ciudad de Mexico</td>
<td>12.12.1857</td>
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<td>4</td>
<td>Rio de Janeiro</td>
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<td>5</td>
<td>San Francisco</td>
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<tr>
<td>6</td>
<td>Toronto</td>
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<td>75</td>
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<td>Geneve</td>
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<tr>
<td>8</td>
<td>Alexandria</td>
<td>08.01.1863</td>
<td>32</td>
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<tr>
<td>9</td>
<td>Den Haag</td>
<td>03.06.1864</td>
<td>105</td>
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<tr>
<td>10</td>
<td>Sankt Petersburg</td>
<td>08.09.1863</td>
<td>240</td>
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<tr>
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<td>Berlin</td>
<td>22.06.1865</td>
<td>189.4</td>
</tr>
<tr>
<td>12</td>
<td>Vienna</td>
<td>04.10.1865</td>
<td>172</td>
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<tr>
<td>13</td>
<td>Budapest</td>
<td>30.07.1866</td>
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<td>Warszawa</td>
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<td>Stuttgart</td>
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<td>Bruxelles</td>
<td>01.05.1869</td>
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<td>Timisoara</td>
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<td>Arad</td>
<td>24.10.1869</td>
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<tr>
<td>20</td>
<td>Turino</td>
<td>1872</td>
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<td>Porto</td>
<td>15.05.1872</td>
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<td>18.05.1872</td>
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<tr>
<td>23</td>
<td>Frankfurt/Main</td>
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<tr>
<td>29</td>
<td>Lisboa</td>
<td>17.11.1873</td>
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</tbody>
</table>
Tram network in Leipzig

One of the oldest and biggest tram networks in the world

3. Köln
4. Berlin
10. Leipzig
14. Dresden
16. Bonn
Leipzig – Tram network in the TOP 10 of the world

<table>
<thead>
<tr>
<th>Top</th>
<th>City</th>
<th>Year</th>
<th>km</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Melbourne</td>
<td>11.11.1885</td>
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<tr>
<td>2</td>
<td>Sankt Petersburg</td>
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<td>3</td>
<td>Sofia</td>
<td>01.12.1898</td>
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<tr>
<td>4</td>
<td>Collogne</td>
<td>18.05.1877</td>
<td>194</td>
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<tr>
<td>5</td>
<td>Berlin</td>
<td>22.06.1865</td>
<td>189,4</td>
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<td>6</td>
<td>Lodz</td>
<td>24.12.1898</td>
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<td>Moskau</td>
<td>22.06.1872</td>
<td>181</td>
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<tr>
<td>8</td>
<td>Kattowice</td>
<td>27.05.1894</td>
<td>171</td>
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<tr>
<td>9</td>
<td>Budapest</td>
<td>30.07.1866</td>
<td>155</td>
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<tr>
<td>10</td>
<td>Leipzig</td>
<td>18.05.1872</td>
<td>148</td>
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<tr>
<td>11</td>
<td>Bucuresti</td>
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<td>143</td>
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<tr>
<td>12</td>
<td>Prag</td>
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<td>141</td>
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<td>13</td>
<td>Bruxelles</td>
<td>01.05.1869</td>
<td>138</td>
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<td>14</td>
<td>Dresden</td>
<td>26.09.1872</td>
<td>131,4</td>
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<td>15</td>
<td>Oslo</td>
<td>06.10.1875</td>
<td>131,4</td>
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<tr>
<td>16</td>
<td>Bonn</td>
<td>15.04.1891</td>
<td>125,4</td>
</tr>
</tbody>
</table>
Tram stop Goerdelerring
Tram stop Main Station
Tram stop New fairground
Tram stop New Fairground
Tram stop Lindenau bus depot
Cycling in Leipzig
Cycling in Leipzig

- good conditions for cycling:
  - plan landscape
  - compact city principle as part of city development
- number of bicycles: approx. 535,000
- length of bicycle net
  - bicycle lanes: 108 km
  - bicycle advisory lanes: 18 km
  - bicycle paths: 225 km
  - others: 93 km
  - overall: 444 km
Cycling in Leipzig

- 1998
  ca. 236,000 bicycles for 437,000 inhabitants
  = ca. 540 bicycles per 1,000 inhabitants

- 2013
  ca. 495,000 bicycles for 539,000 inhabitants
  = ca. 918 bicycles per 1,000 inhabitants

- growth from 1998 to 2013
  ca. 259,000 bicycles
  = ca. 378 bicycles per 1,000 inhabitants
  or 170 %
Cycling in Leipzig

- Cycling share of Modal Split:

  - SrV 1990: 5.2 %
  - SrV 1994: 5.8 %
  - SrV 1998: 13.2 %
  - SrV 2003: 12.4 %
  - SrV 2008: 14.4 %
  - SrV 2013: 15.6 %
  - SrV 2015: 17.3 %

  growth > 250 %

  growth ca. 333 %
Cycling in Leipzig

- Cycling share of Modal Split:
  - SrV 1990: 5.2 %
  - SrV 1994: 5.8 %
  - SrV 1998: 13.2 %
  - SrV 2003: 12.4 %
  - SrV 2008: 14.4 %
  - SrV 2013: 15.6 %
  - SrV 2015: 17.3 %

Over 20 years plus 400 % of bike trips per day in Leipzig
bicycle parking downtown

- bicycle racks for two bicycles each:
  - 2008: ca. 630 bicycle racks
  - 2009: ca. 730
  - 2010: ca. 830
  - 2011: ca. 880
  - 2012: ca. 1,030
  - 2013: ca. 1,200
  - 2015: ca. 1,600

Additional bicycle parking at private bicycle racks (some with advertising), on privat grounds or in garages.
Best practice for bicycle infrastructure

bicycle parking

- bicycle parking concept for city center
- use of parking rack „Leipziger Anlehnbügel“
- approx. 4,500 parking racks placed in Leipzig
bicycle garage in the university

- Opening of bicycle garages:
  - In 2009: ca. 600 parking lots
  - In 2012: ca. 1,100 additional parking lots
  - Total: ca. 1,700 parking lots
Best practice for bicycle infrastructure

bicycle underground parking at the university
Examples for bicycle infrastructure

bicycle parking at the zoological garden
Examples for bicycle infrastructure

bicycle parking at the German National Library
Examples for bicycle infrastructure

bicycle parking at the main train station
Examples for bicycle infrastructure

bicycle parking in the pedestrian zone
Examples for bicycle infrastructure

bicycle parking next to mobility center
Examples for bicycle infrastructure

bicycle parking in the city centre
Bicycle parking in the city center near the university

approx. 300 bicycles on this picture
Best practice for bicycle infrastructure

bicycle lanes

- width of bicycle lanes: mostly 1.85 m
- length: 108 km of 444 km bicycle net
Examples for bicycle infrastructure

bicycle lanes in intersections

- for improved recognizability: red colouring of bicycle lanes

Dresdner Straße

Karl-Liebknecht-Straße

Dresdner Straße
Best practice for bicycle infrastructure

bicycle lanes alongside to parking

- marking of the bicycle lanes on both sides
- marking with 0.50 m next to parking, for protection against car doors opening

An der Tabaksmühle

Dresdner Straße
Examples for bicycle infrastructure

bicycle lanes alongside to parking
Thank you for your attention!
City of Leipzig
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