GREATER FLORENCE
A dynamic, resilient and compact city

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Mayor of Florence
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REGENERATING THE CITY
SUSTAINABLE PLANNING

Developing a polycentric structure for a more sustainable, compact and socially affordable resilient city

ZERO VOLUME CITY: REGULATION TO PREVENT LAND CONSUMPTION
- Demolition and reconstruction in situ
- Transfer and reconstruction elsewhere
- Regeneration of rundown urban areas with rewarding energy efficiency systems

TRANSPORT NETWORK MODERNIZATION AND MOBILITY EFFICIENCY
- Local rail, tram, bus, highway, parking spaces
- Low-emission vehicles, soft mobility, e-mobility

EFFICIENCY IN INFORMATION AND COMMUNICATION TECHNOLOGIES (ICT)
- Information technology, infomobility platform, traffic supervisor, app showcase
- Digitalisation of public services, e-government and WiFi network extension

ENHANCING THE SUSTAINABILITY AND RESILIENCE OF THE CITY
- Sustainable building and extension of the city’s ecological network
- Smart lighting, sensor system, green procurement, bio-schools
- Action plan on mitigation and adaptation strategy
“ZERO VOLUME CITY”

An example: Parco della Musica, Florence’s New Opera House: from an unused industrial district to a cultural hotspot

TRANSPORT NETWORK MODERNIZATION
The sustainable integrated network

ZERO EMISSIONS
ZERO OWNERSHIP

PUBLIC TRANSPORTATION

SOFT MOBILITY

MIX-MODE PARKING LOTS

CAR AND BIKE SHARING

E-TAXI AND E-MOBILITY
“Florence is the most popular compact and global city in Italy”

As regional capital, Florence absorbs political and administrative activities (such as schools, institutions, Italian and foreign universities), as well as strong tourism-related activities.

**Tourist figures in Florence (year 2015)**

- **600,000** units of residents + visitors (Daily population)
- **13.655 mln** visitors in the whole metropolitan area
- **9.169 mln** visitors within the Florence city boundaries
- **600,000** residents per Km²
- **378,174** units of resident population of which 59,601 foreigners
- **102.41** km² of municipal area extension
- **68,128** student population
- **3,692** residents per Km²
- **14,300** t/yr CO₂ emissions reduction
- **28,600** t/yr PM10 emissions reduction
- **37.2** mln total passengers
- **4.6** t/yr private vehicle use reduction

**TRANSPORT NETWORK MODERNIZATION > WHY?**

**TRANSPORT NETWORK MODERNIZATION**

Public transportation: the tramway system

- **LINEA 1** fully operational since 2010
- **LINEA 2** and **LINEA 3** in advanced stage of construction and fully operational by 2018

**Florence tramway system**

- **LINEA 1**
- **LINEA 2**
- **LINEA 3**

**Total investment**
- **390.26 mln €**

**Total passengers**
- **37.2** mln

**CO₂ emissions reduction**
- **14,300** t/yr

**PM10 emissions reduction**
- **4.6** t/yr

**Private vehicle use reduction**
- **28,600**
**TRANSPORT NETWORK MODERNIZATION**

Public transportation: the tramway system

**LINEA 4** and extension of **LINEA 2** to Sesto Fiorentino in planning stage and operational by **2021**

Total investment: **716.26 mln €**

Total passengers: **53.2 mln**

CO₂ emissions reduction: **20,400 t/yr**

PM₁₀ emissions reduction: **6.5 t/yr**

Private vehicle use reduction: **40,900**

**Public transportation: the tramway system**

- **LINEA 1**
- **LINEA 2**
- **LINEA 3**
- **LINEA 4**
- **LINEA 5**
- **LINEA 6**
- **LINEA 7**

**Florence tramway system**

**Total investment**

**1,700 mln €**

**Total passengers**

**85 mln**

CO₂ emissions reduction: **32,700 t/yr**

PM₁₀ emissions reduction: **10.5 t/yr**

Private vehicle use reduction: **65,400**
Florence has the most e-vehicles in Italy: **4,000** electric vehicles (public and private sectors)

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
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<tbody>
<tr>
<td>10</td>
<td>Mini electric bus (for the Unesco Area)</td>
</tr>
<tr>
<td>130</td>
<td>Electric municipal vehicles (bikes, car, vans, etc.)</td>
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<tr>
<td>1/1000</td>
<td>Inhabitants electric recharge points (either public and reserved for municipality)</td>
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<tr>
<td>4</td>
<td>Very fast recharge points for the city’s e-taxi fleet (first municipality in Italy to provide the service)</td>
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<tr>
<td>2015/16</td>
<td>Free recharge points to improve e-vehicle use</td>
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**TODAY’S TAXI FLEET**

<table>
<thead>
<tr>
<th>2016</th>
<th>2020</th>
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</thead>
<tbody>
<tr>
<td>TOTAL NUMBER OF VEHICLES</td>
<td>790</td>
</tr>
<tr>
<td>Electric vehicles</td>
<td>72</td>
</tr>
<tr>
<td>Hybrid-electric vehicles</td>
<td>226</td>
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<tr>
<td>Thermic engine vehicles</td>
<td>492</td>
</tr>
</tbody>
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TRANSPORT NETWORK MODERNIZATION

The sustainable integrated network of zero emission e-taxis
LEAVE YOUR CAR
MIXED MODE PARKING LOTS
A new “Park and Ride” facility inside the A1 highway: a tramway connection between the highway and the city centre

TRANSPORT NETWORK MODERNIZATION
The sustainable integrated network / Soft mobility

Car sharing fleet
today (2016)
600 vehicles
(200 electric vehicles)
free flow 550
(200 electric vehicles)
and 50 traditional

Car sharing fleet
tomorrow (2021)
1,200 vehicles
(400 electric vehicles)
free flow 1,200
(400 electric vehicles)

Bike sharing
today (2016)
50 stations
750 bikes/e-bikes

Bike sharing
tomorrow (2021)
120 stations
1,800 bikes/e-bikes

Zero emissions, zero ownership / Car and bike sharing
TRANSPORT NETWORK MODERNIZATION
Soft mobility

City’s bike-path network today (2016): 137 km
City’s bike-path network tomorrow (2022): 187 km
Completion of the bike-path city’s network and its extension to the metropolitan area
Completion of the bike-station system (main hub: Santa Maria Novella)

FLORENCE
THE WALKING CITY
The largest European pedestrian area within a city centre

Pedestrian areas are growing all the time:
- 2009 > 260,000 m²
- 2012 > 380,000 m²
  In particular: Piazza Duomo, via Tornabuoni & Piazza Pitti
- 2014 > 395,000 m²
- 2016 > 400,000 m²
  Piazzale Michelangelo
EFFICIENCY IN INFORMATION AND COMMUNICATION TECHNOLOGIES (ICT)
Innovation and ICT as driving forces

- Smart city control room (dataset and big data managing)
- Traffic control room
- Remotely controlled and managed traffic lights (> 250)
- Automated entrance surveillance
- Eco-road pricing IOT to reduce traffic and lower pollution
- Info displays and real time mobile apps

ENHANCING THE SUSTAINABILITY AND RESILIENCE OF THE CITY
Facing mitigation and adaptation to climate change with an integrated approach

After the “Covenant of Mayors” (2010), “Mayors Adapt” and “Compact of Mayors” initiatives officially signed in October 2015, efforts will be focused on:
- Water management risks
- Heat related health and environment risks
- Extreme weather events and disaster-related risks

FROM PLAN TO PROJECT

Partner / European Project “RESOLUTE”
RESilience management guidelines and Operationalization applIed to Urban Transport Environment

Partner / European Project “REPLICATE”
REnaissance PLaces with Innovative Citizenship And Technology for developing a smart district model that takes into account and integrates Energy efficiency, e-mobility and innovation ICT
ENHANCING THE SUSTAINABILITY AND RESILIENCE OF THE CITY

Public smart lighting: 45,000 led lamps (2018)

GREATER FLORENCE
Driving the roadmap to become a polycentric compact urban resilient area

Florence > Greater Florence > The Metropolitan City of Florence
One single agreed governance for all the entities of the territory

Metropolitan City of Florence
1,012,180 inhabitants
3,514 km²

Greater Florence
620,000 inhabitants
543.27 km²

Florence
378,184 inhabitants
102.41 km²
Deciding without listening is high-handedness; listening without deciding is powerlessness.