# EUSKALIA HIRIA 2009
# EL PLANAMENTO TERRITORIAL
# UNA REFLEXION DESDE LA INNOVATION
## Iniciativas para la articulatiòn territorial

## LA ARTICULATION DEL AREA METROPOLITANA DE MILAN

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Architecture and Planning Department
Politecnico di Milano

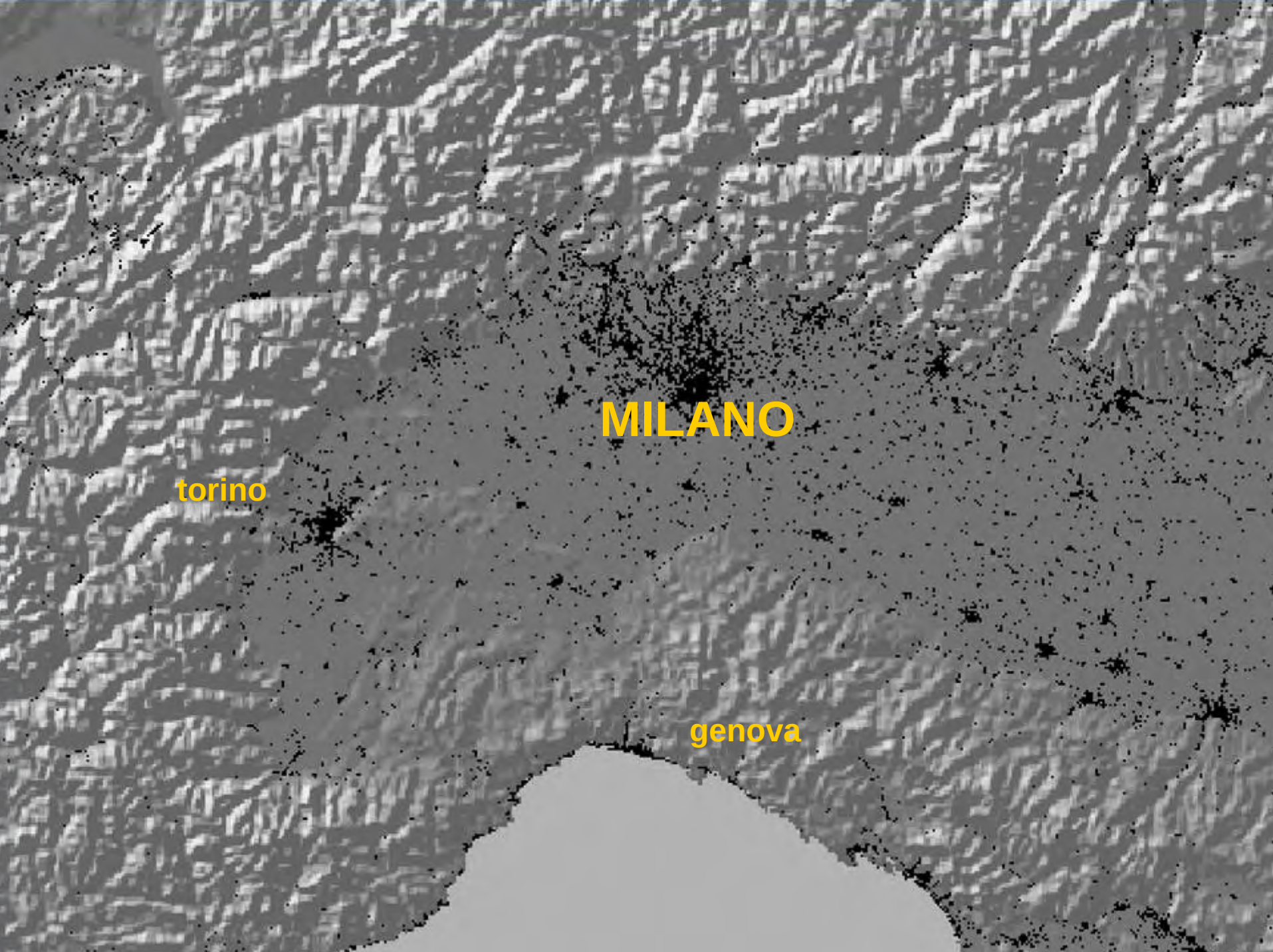
1. Milano metropolitan area structure
2. institutional planning strategies
3. initiatives for the territory articulation: regional scale
4. initiatives for the territory articulation: urban scale

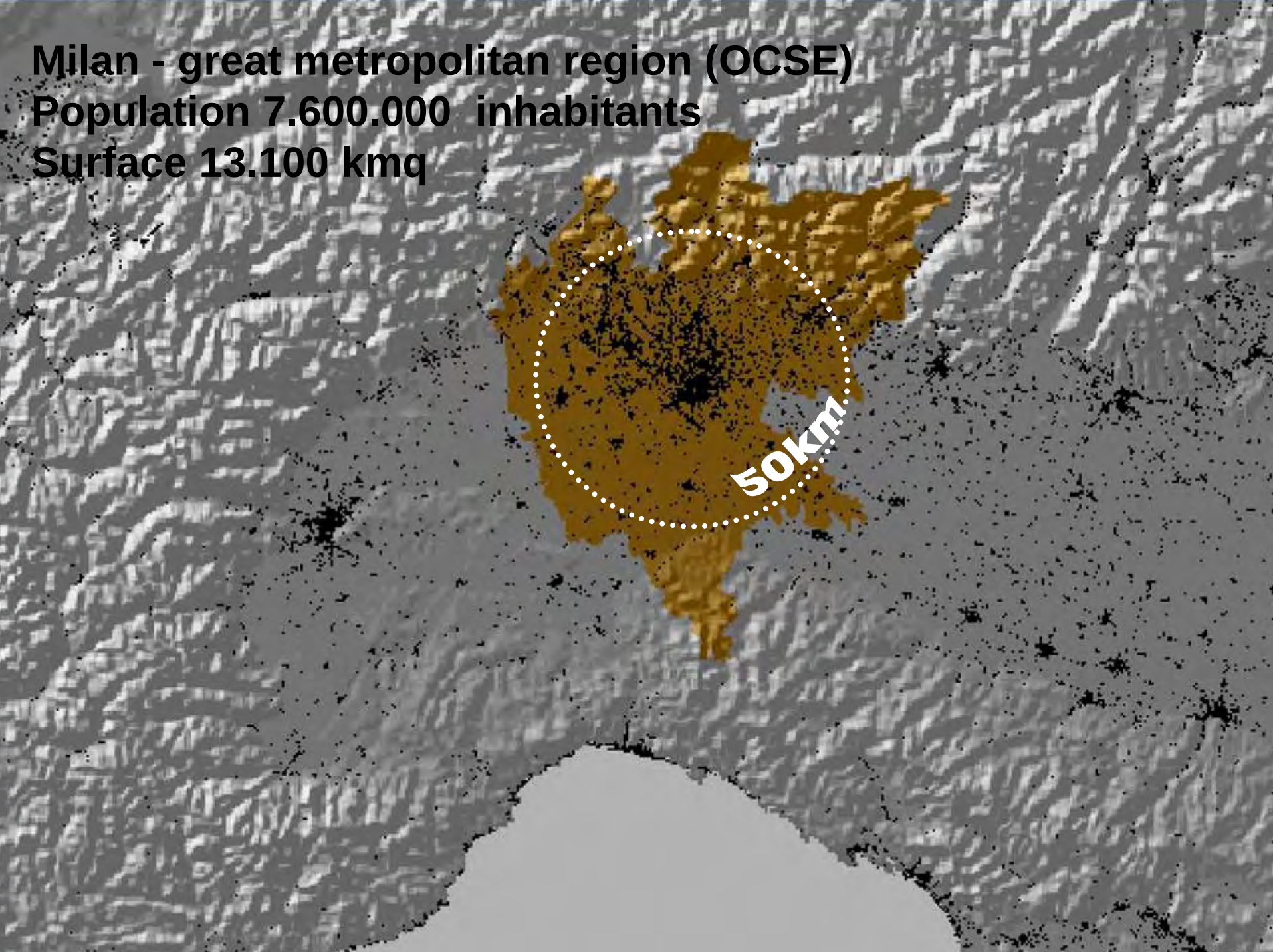
# Milano. metropolitan region . structure

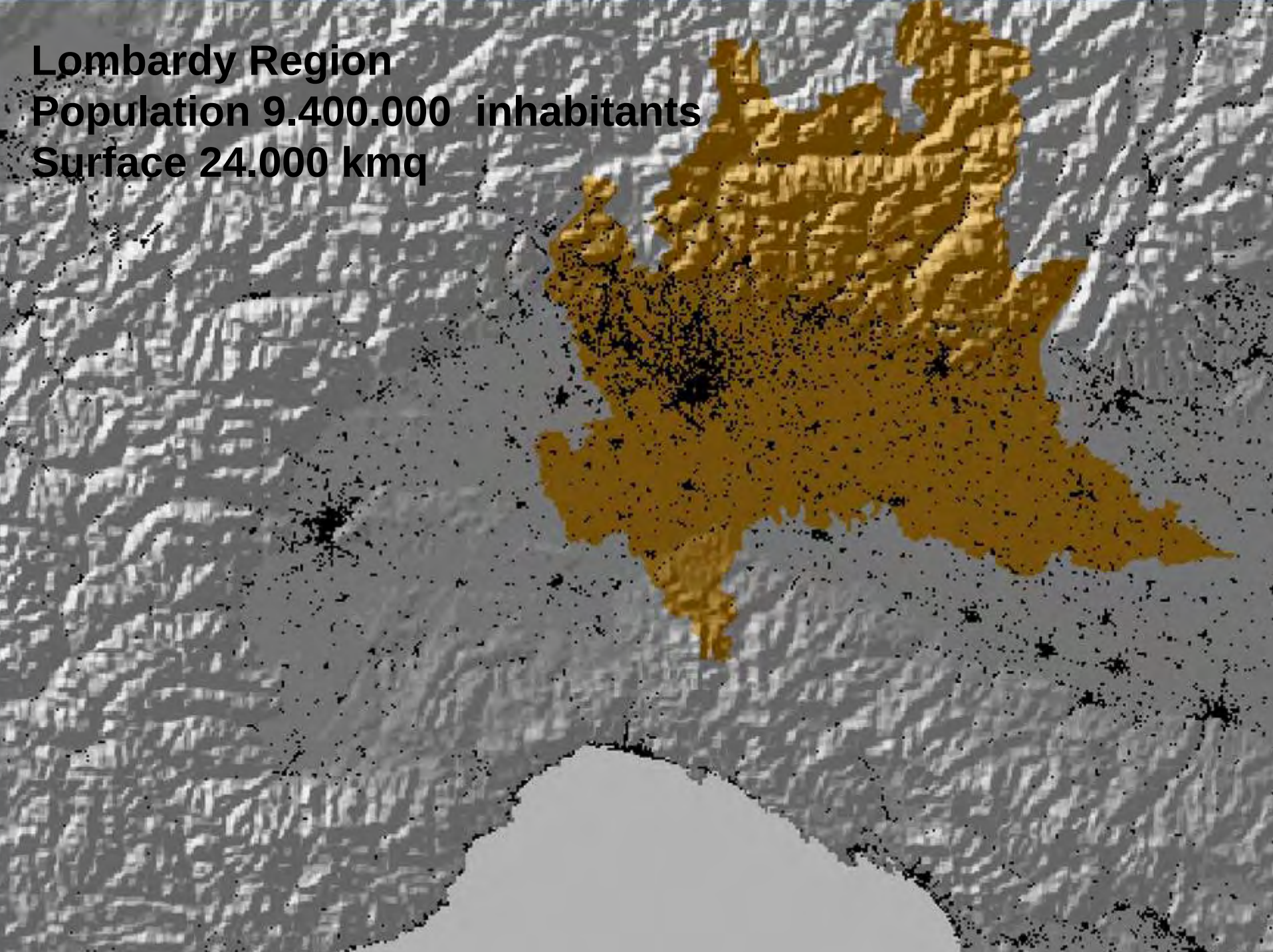
1

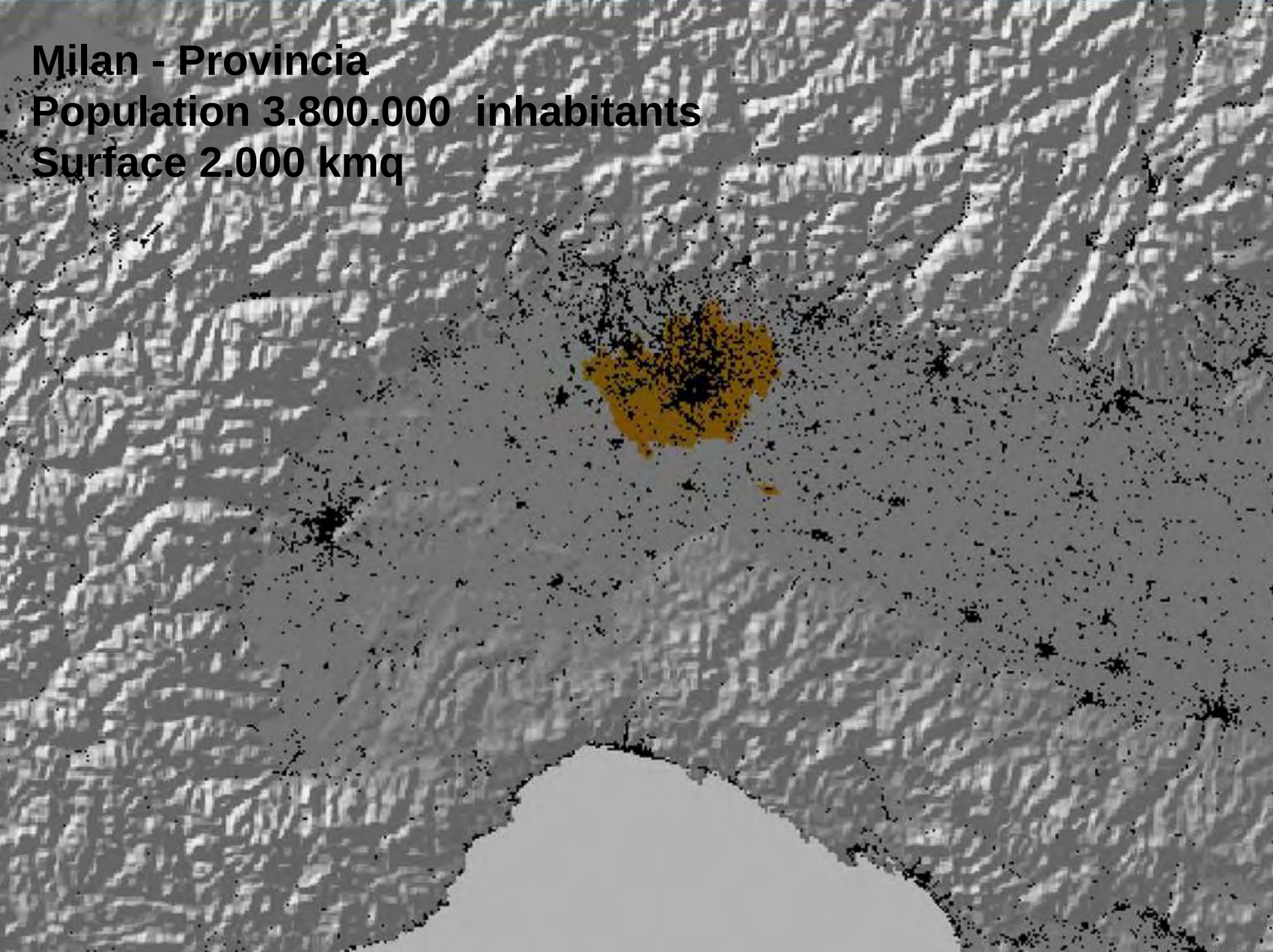
Lyon
Milano
Torino
Bilbao
Toulouse
Genova
Porto
Marseille
Zaragoza
Madrid
Barcelona
Lisboa
Valencia
Sevilla

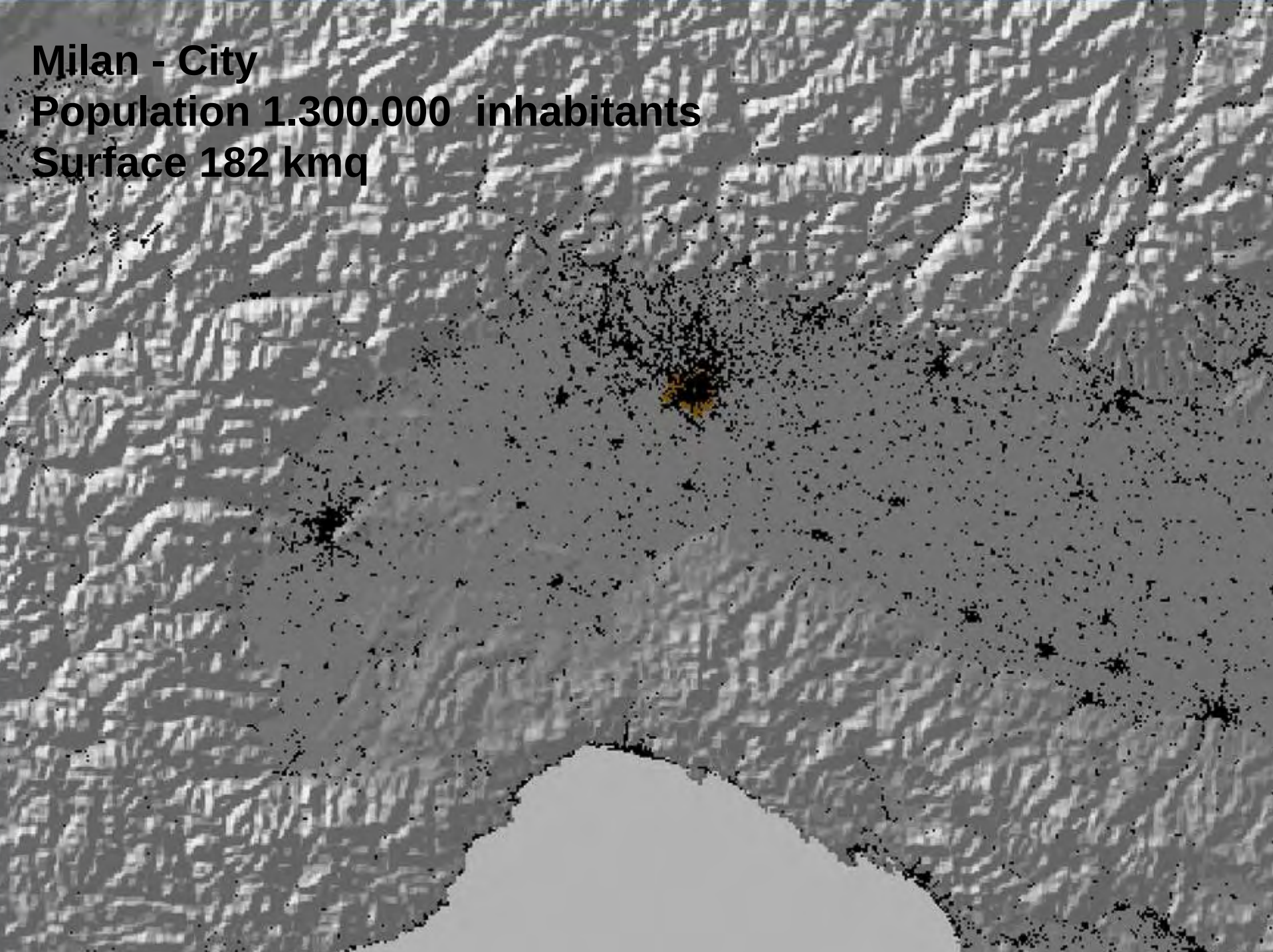
pentagono
milano
diagonal


MILANO
torino
genova


Milan - great metropolitan region (OCSE)
Population 7.600.000 inhabitants
Surface 13.100 kmq
50km


Lombardy Region
Population 9.400.000 inhabitants
Surface 24.000 kmq


Milan - Provincia
Population 3.800.000 inhabitants
Surface 2.000 kmq


Milan - City
Population 1.300.000 inhabitants
Surface 182 kmq

# density

**[R]** Regione Lombardia (nuts II)

**379** **inhabitants/km2**

**[GMR]** Great metropolitan region = Ocse area

**547** **inhabitants/km2**

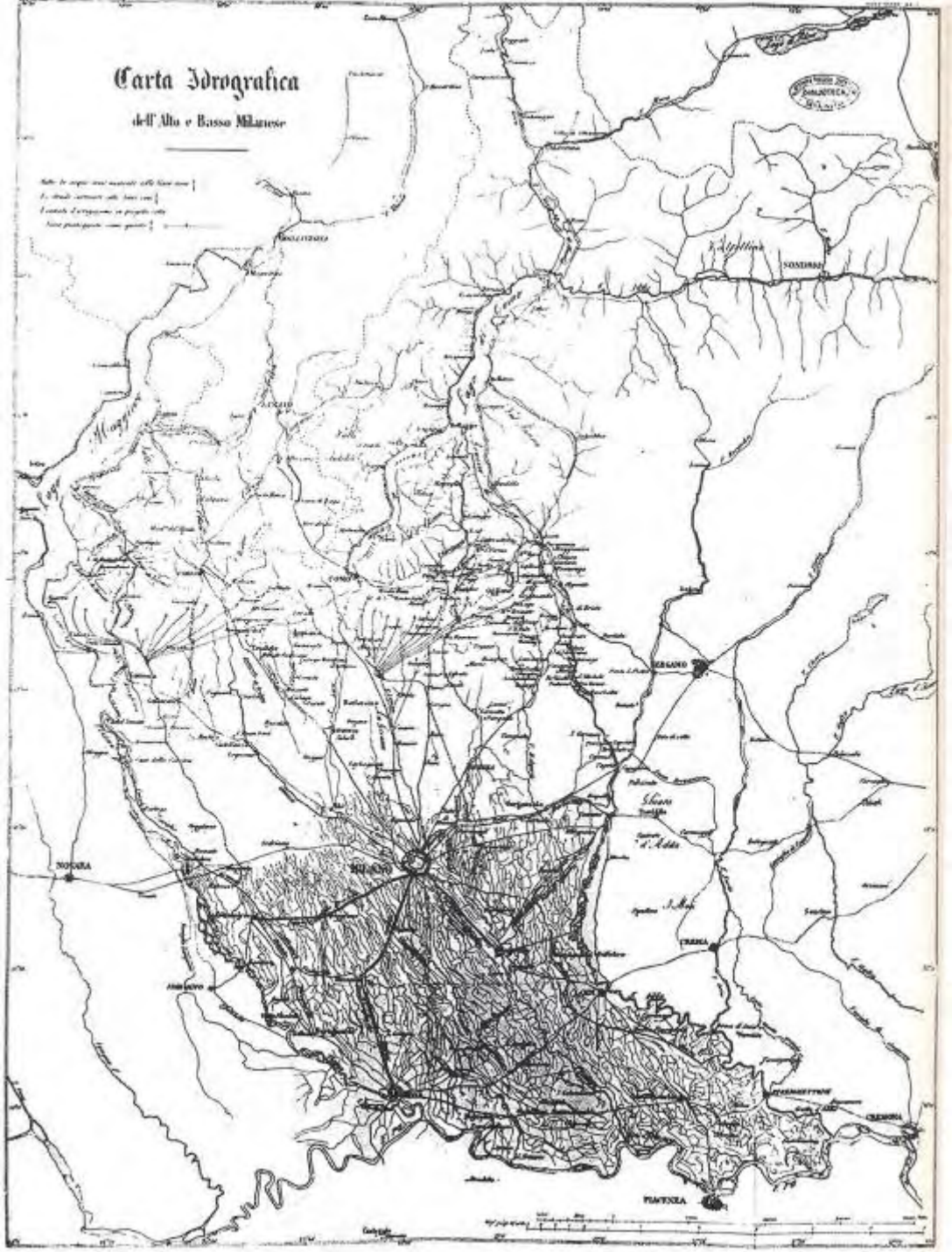
**[MA]** metropolitan area (nuts III) = Provincia Milano

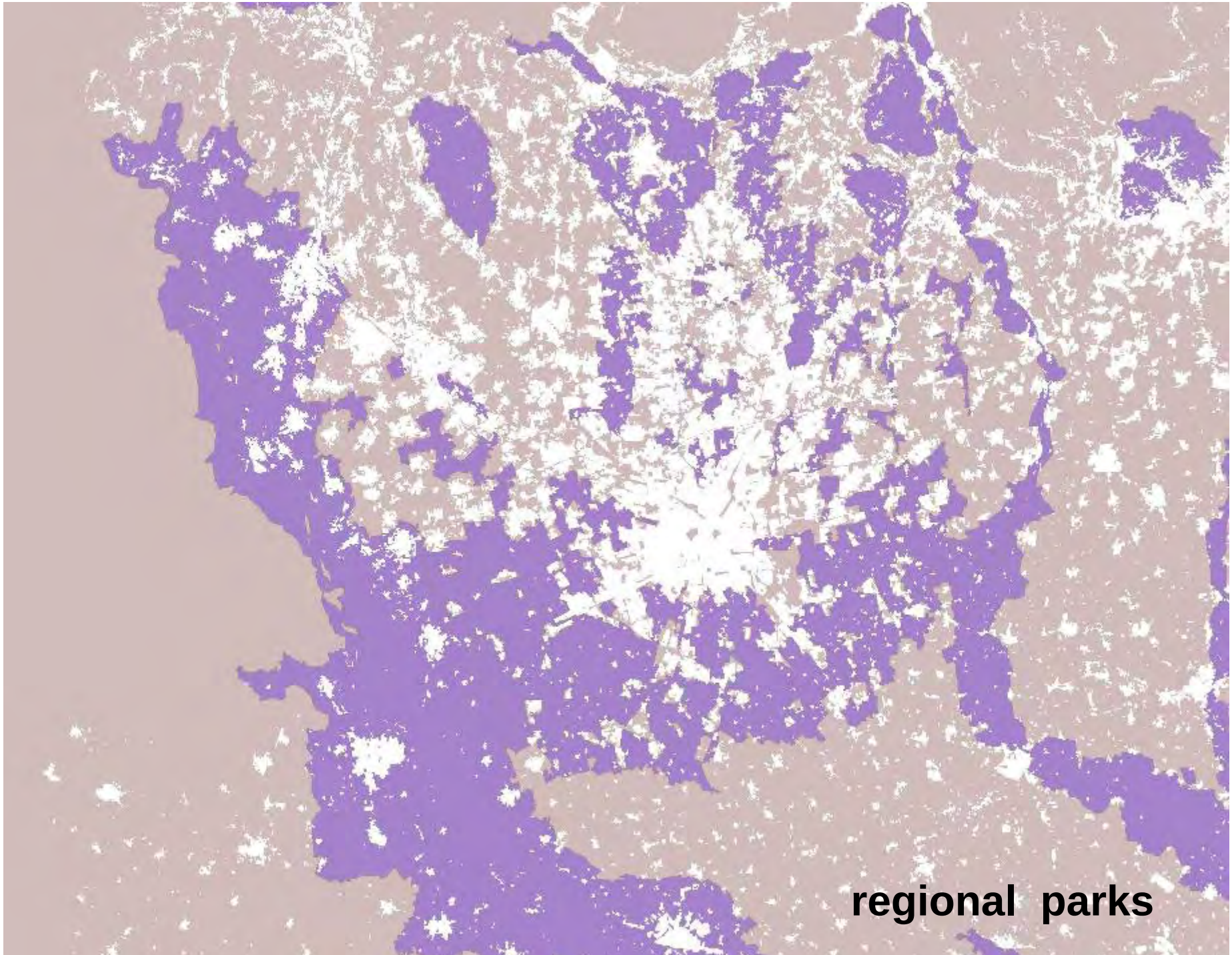
**1.868** **inhabitants/km2**

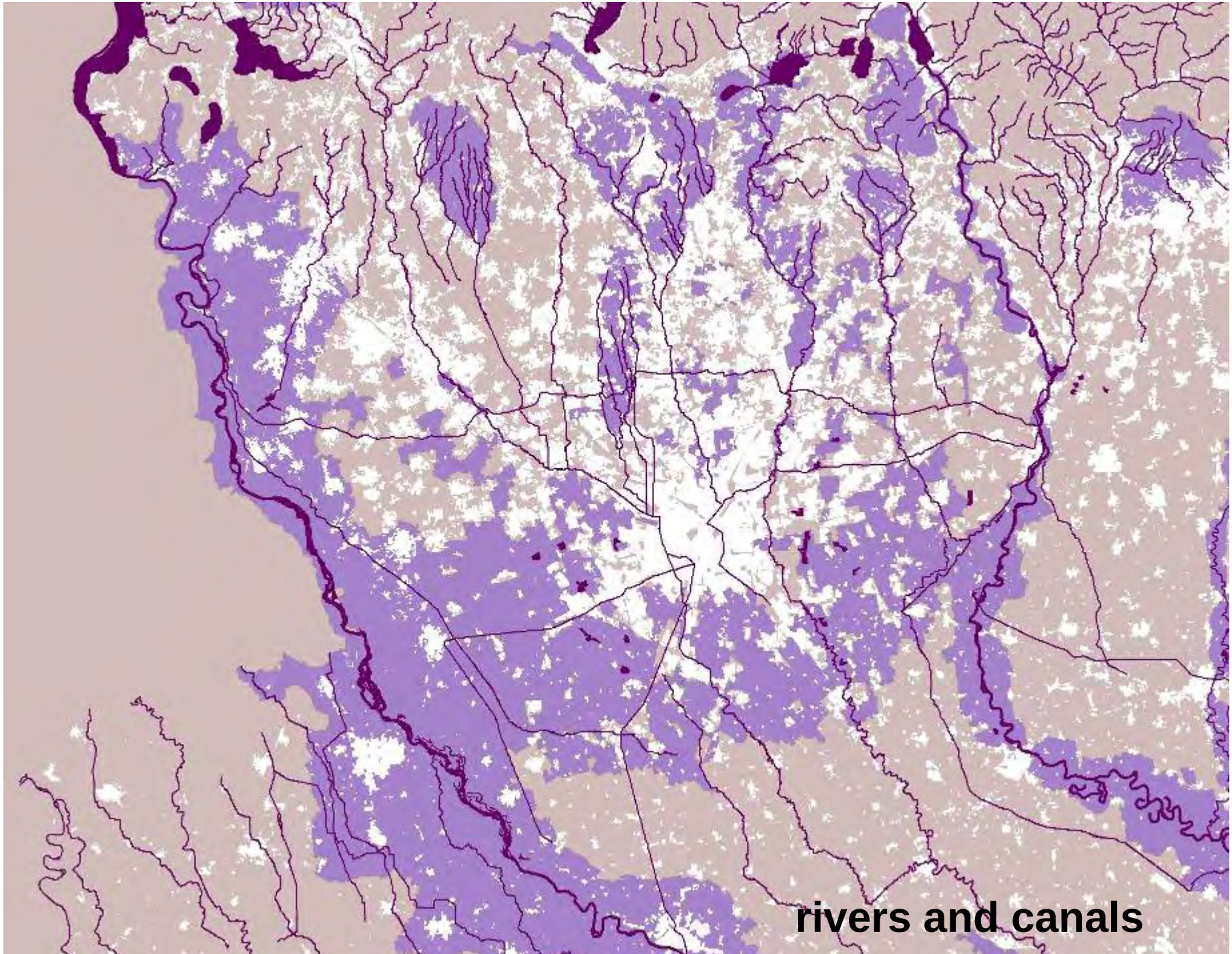
**[CUA ]** central urban area = Milano City

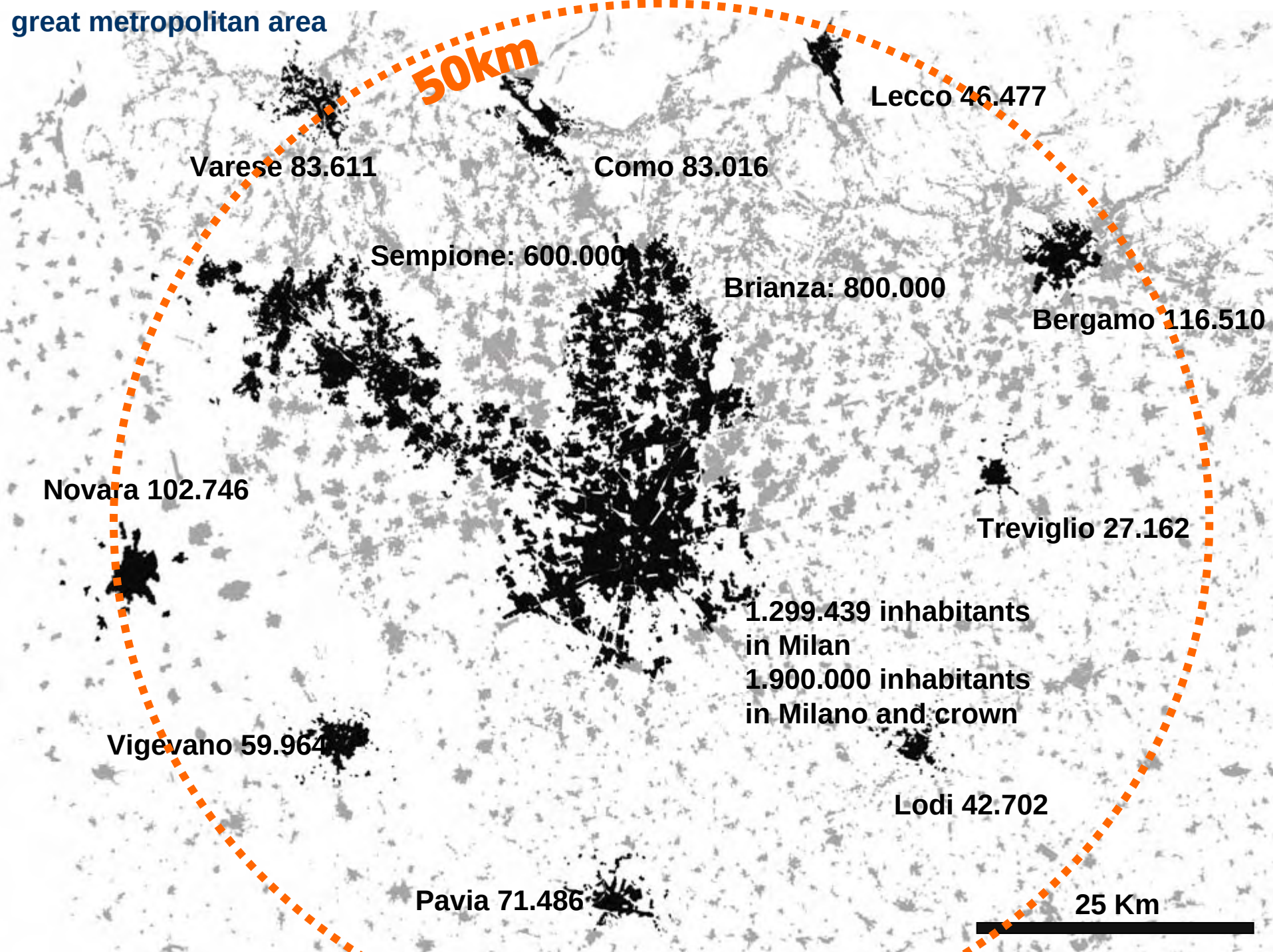
**6.918** **inhabitants/km2**

milano

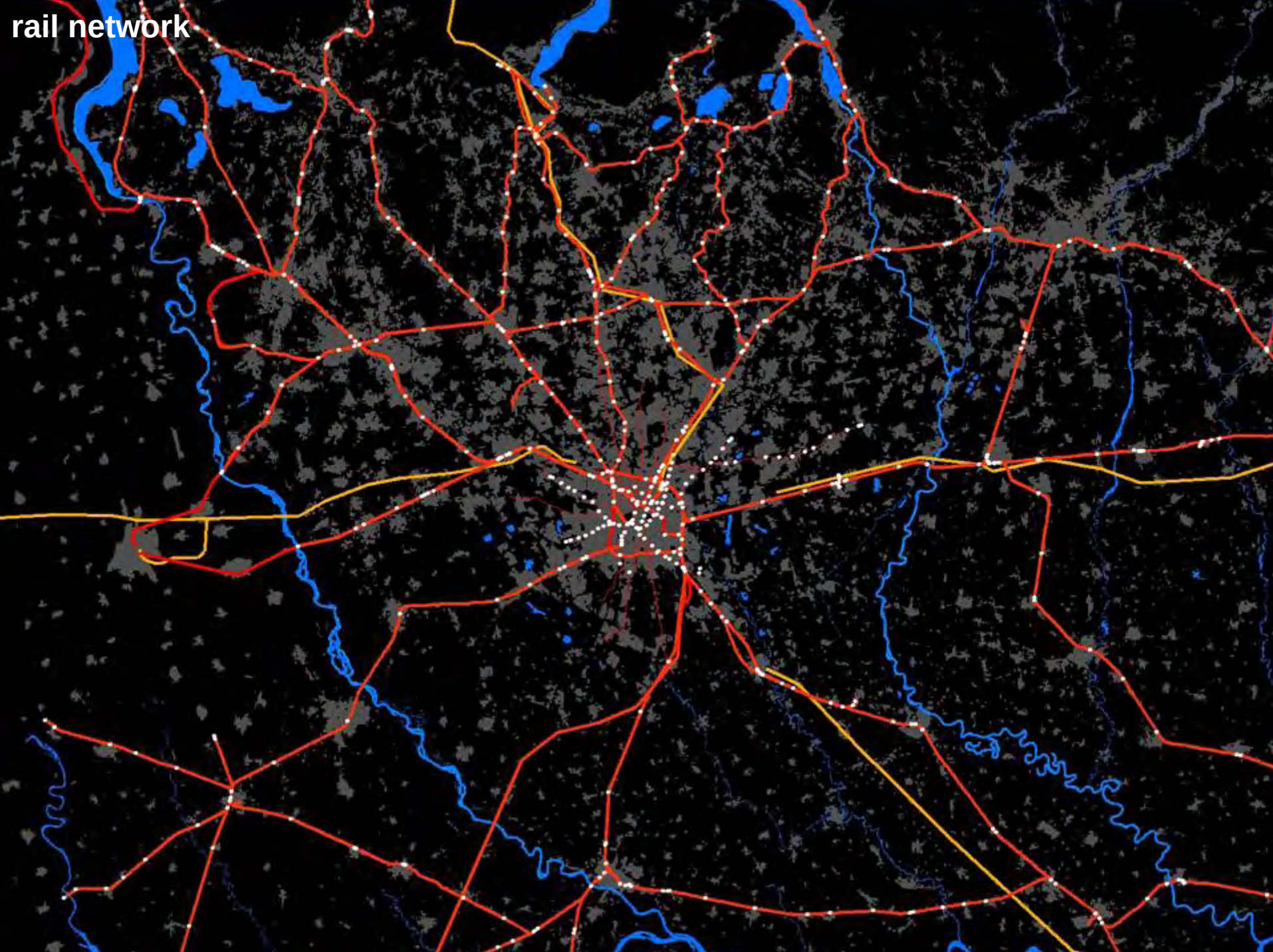

Carta Idrografica
dell'Alto e Basso Milanese
SONDRIO
BERGAMO
NOVARA
MILANO
CREMA
PIACENZA


regional parks


rivers and canals

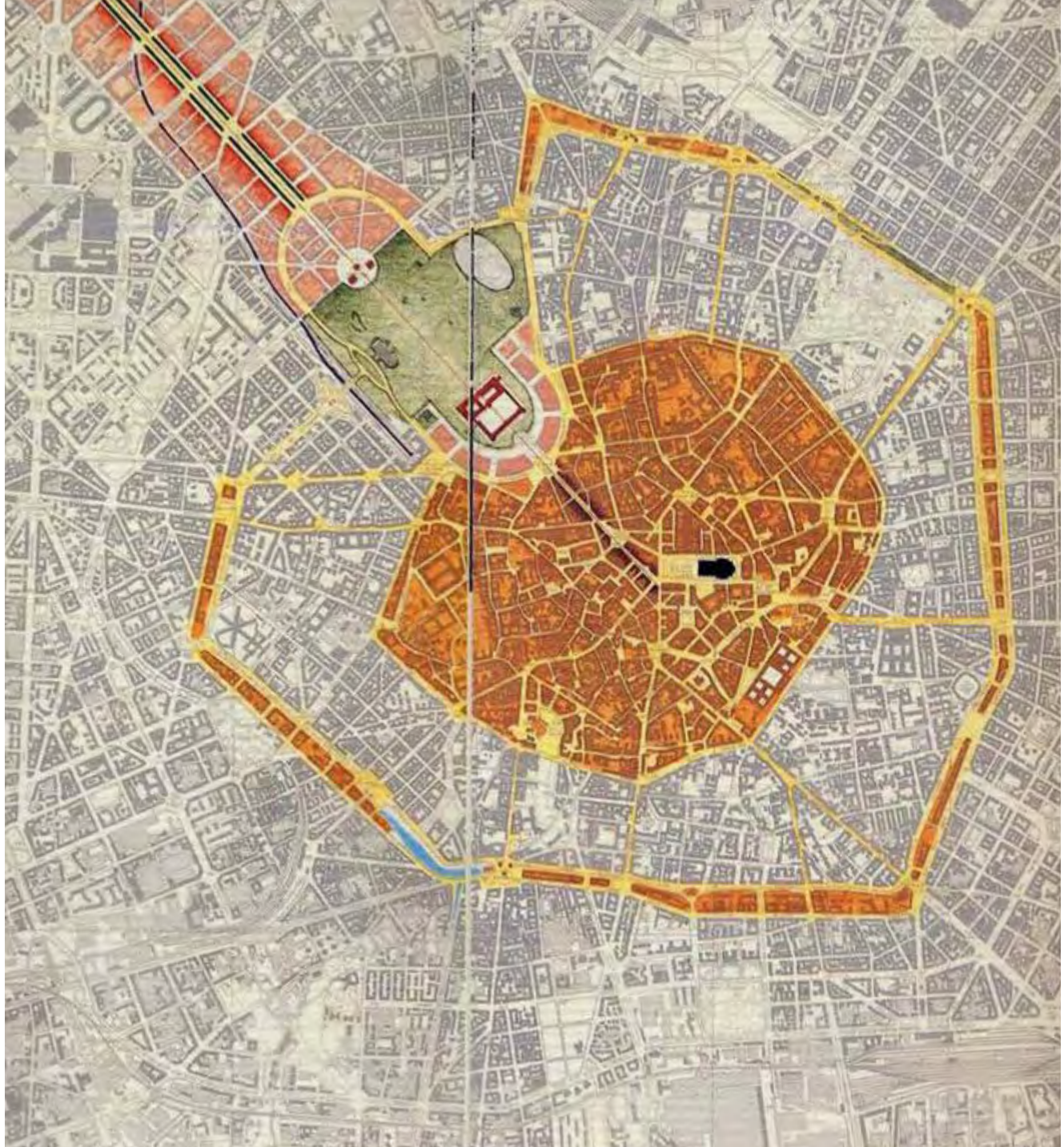

great metropolitan area
50km
Lecco 46.477
Varese 83.611
Como 83.016
Sempione: 600.000
Brianza: 800.000
Bergamo 116.510
Novara 102.746
Treviglio 27.162
1.299.439 inhabitants
in Milan
1.900.000 inhabitants
in Milano and crown
Vigevano 59.964
Lodi 42.702
Pavia 71.486
25 Km

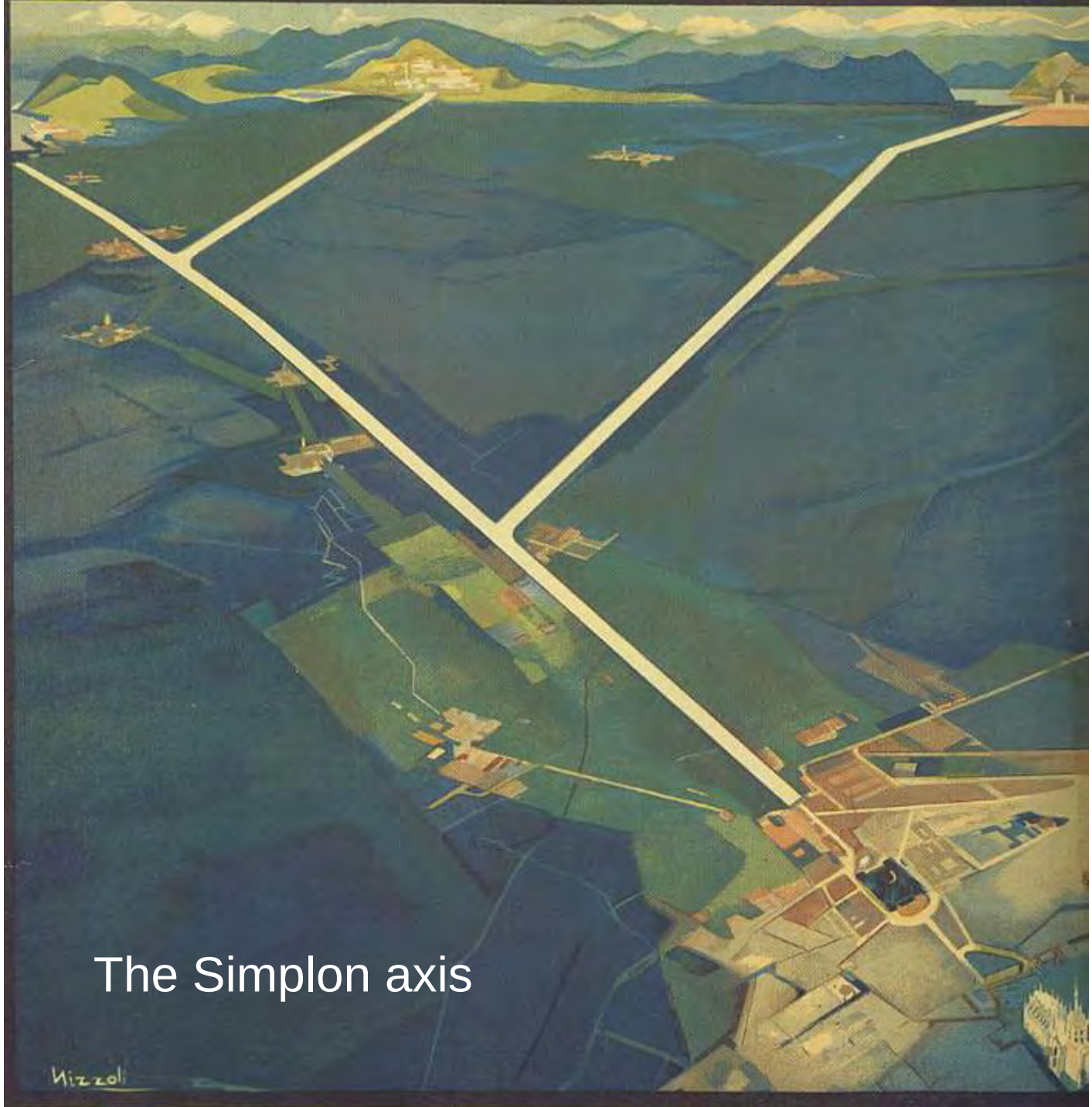
road network


rail network

urban accessibility

**Milano**
**city center**

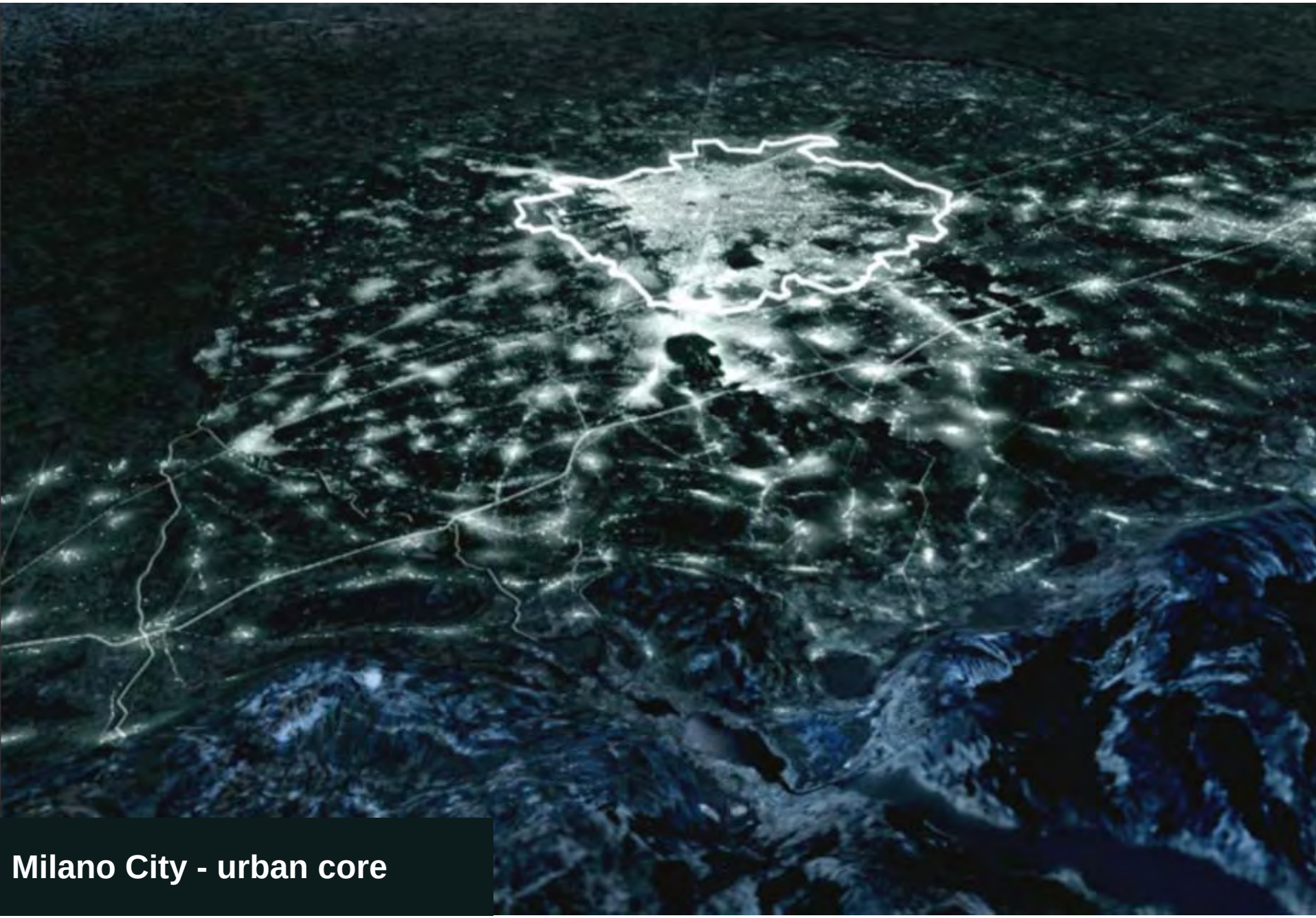





The Simplon axis

milano
Davide Necchi - 2002

North Milan
the infinite city



Milano City - urban core

Noth/East Milan – Brianza hills

East Milan – a linear city

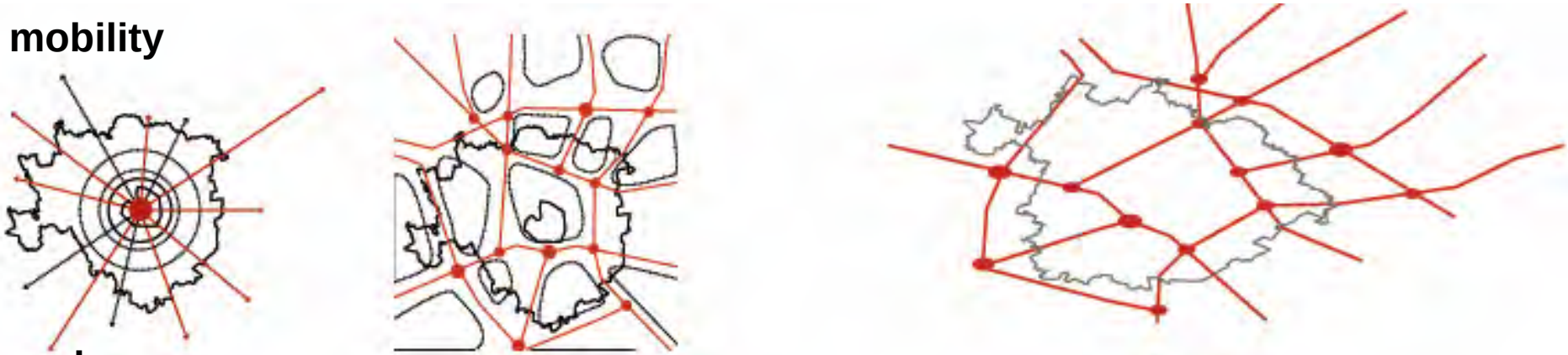
South Milan – the agricultural park

**Current institutional initiatives for the regional articulation of the Milan metropolitan area are based on:**

**Strategies to foster multicentered redevelopment and densification on railway nodes**

**from the historic radial model to a new network model**

**mobility**



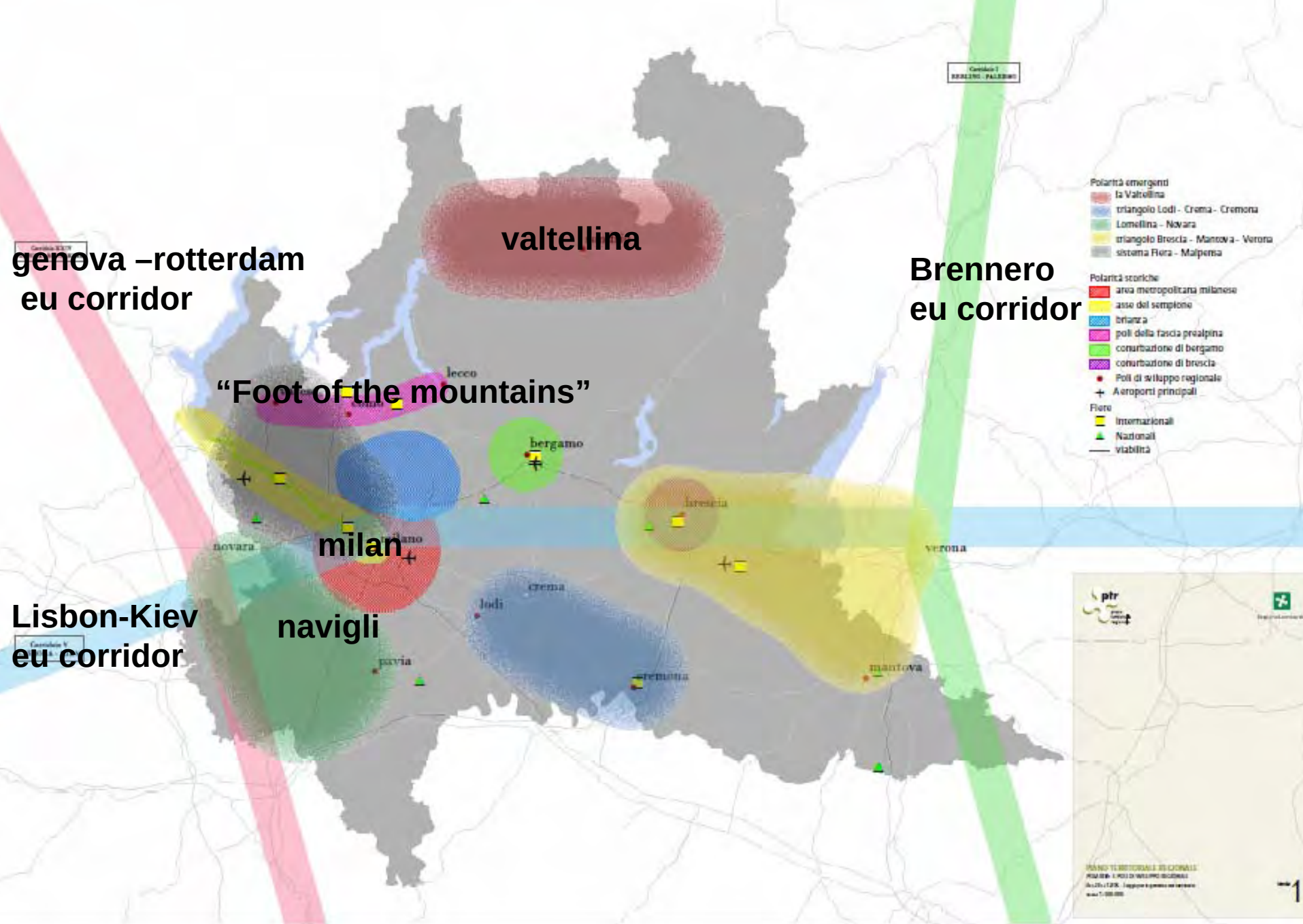
**parks**

**functions of public interest**

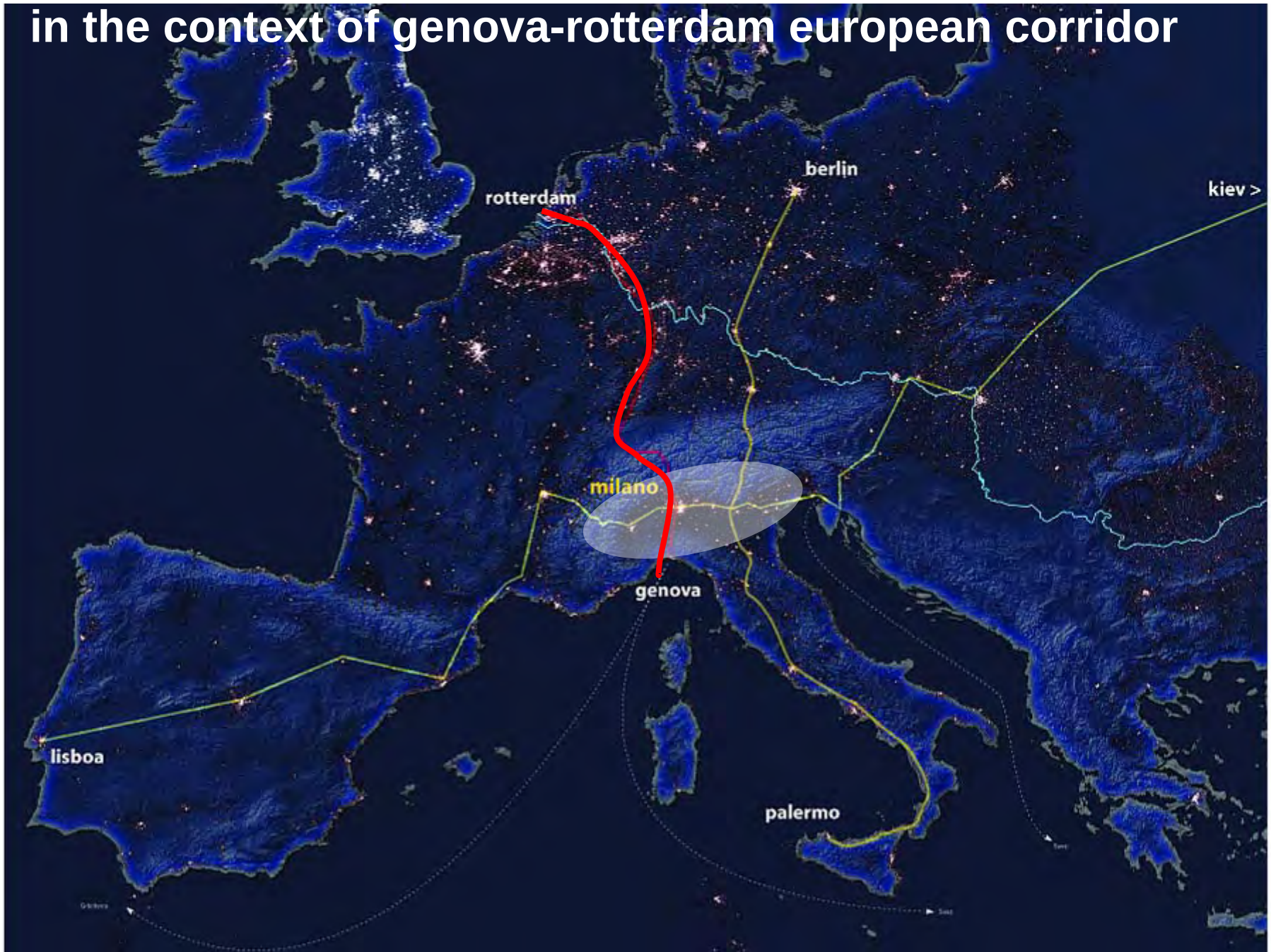
- **new “pedemontana” railway  connection for goods**
- **new “pedemontana” highway and greenway**
- **navigli regional plan**
- **valtellina regional plan**

## Initiatives at the regional scale

3

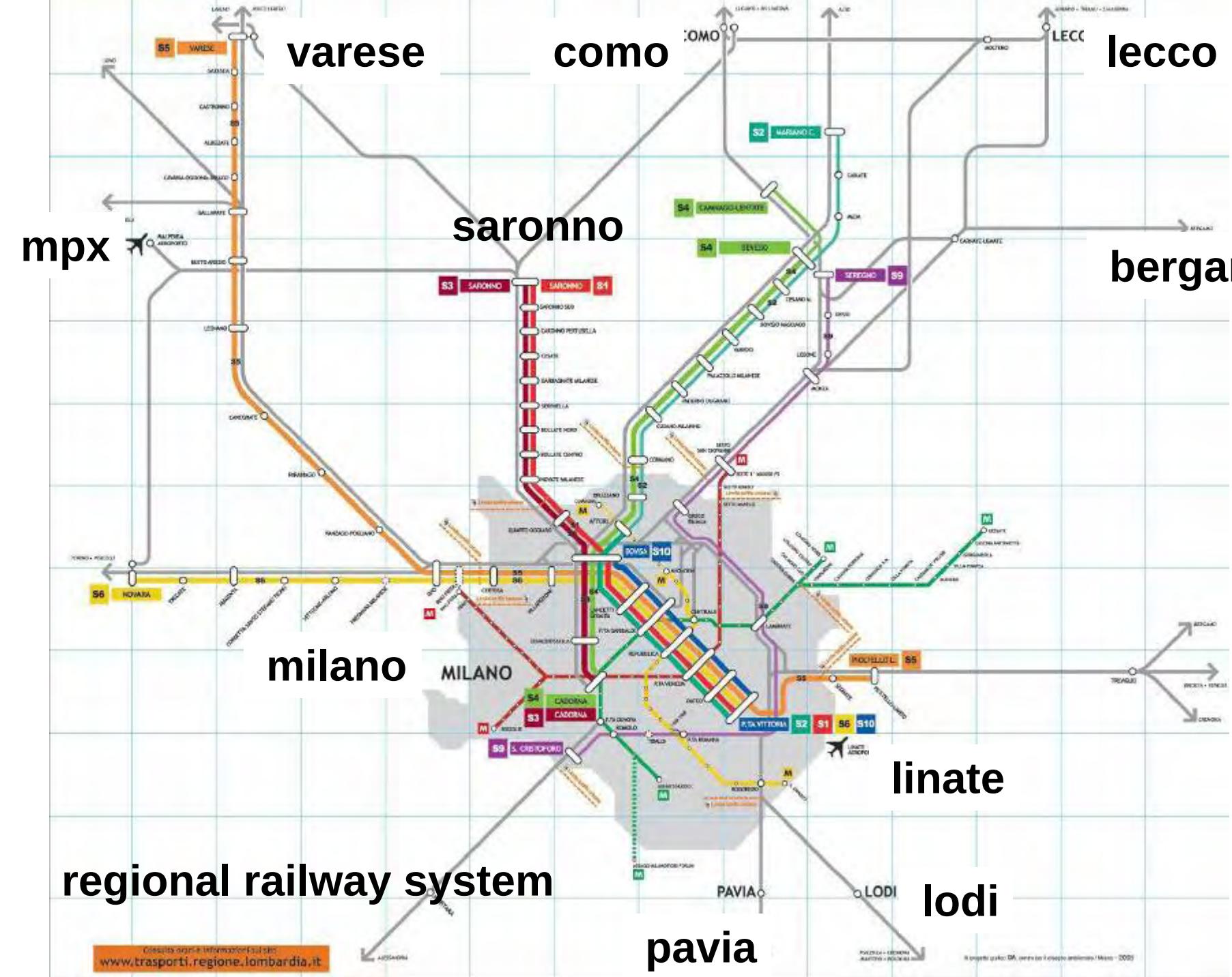

valtellina
genova –rotterdam
eu corridor
Brennero
eu corridor
“Foot of the mountains”
milan
navigli
Lisbon-Kiev
eu corridor
lecco
bergamo
brescia
novara
verona
crema
lodi
pavia
cremona
mantova
Polarità emergenti
la Valtellina
triangolo Lodi - Crema - Cremona
Lomellina - Novara
triangolo Brescia - Mantova - Verona
sistema Fiera - Malpensa
Polarità storiche
area metropolitana milanese
asse del sempione
brianza
poli della fascia prealpina
conurbazione di bergamo
conurbazione di brescia
Poli di sviluppo regionale
Aeroporti principali
Fiere
Internazionali
Nazionali
viabilità

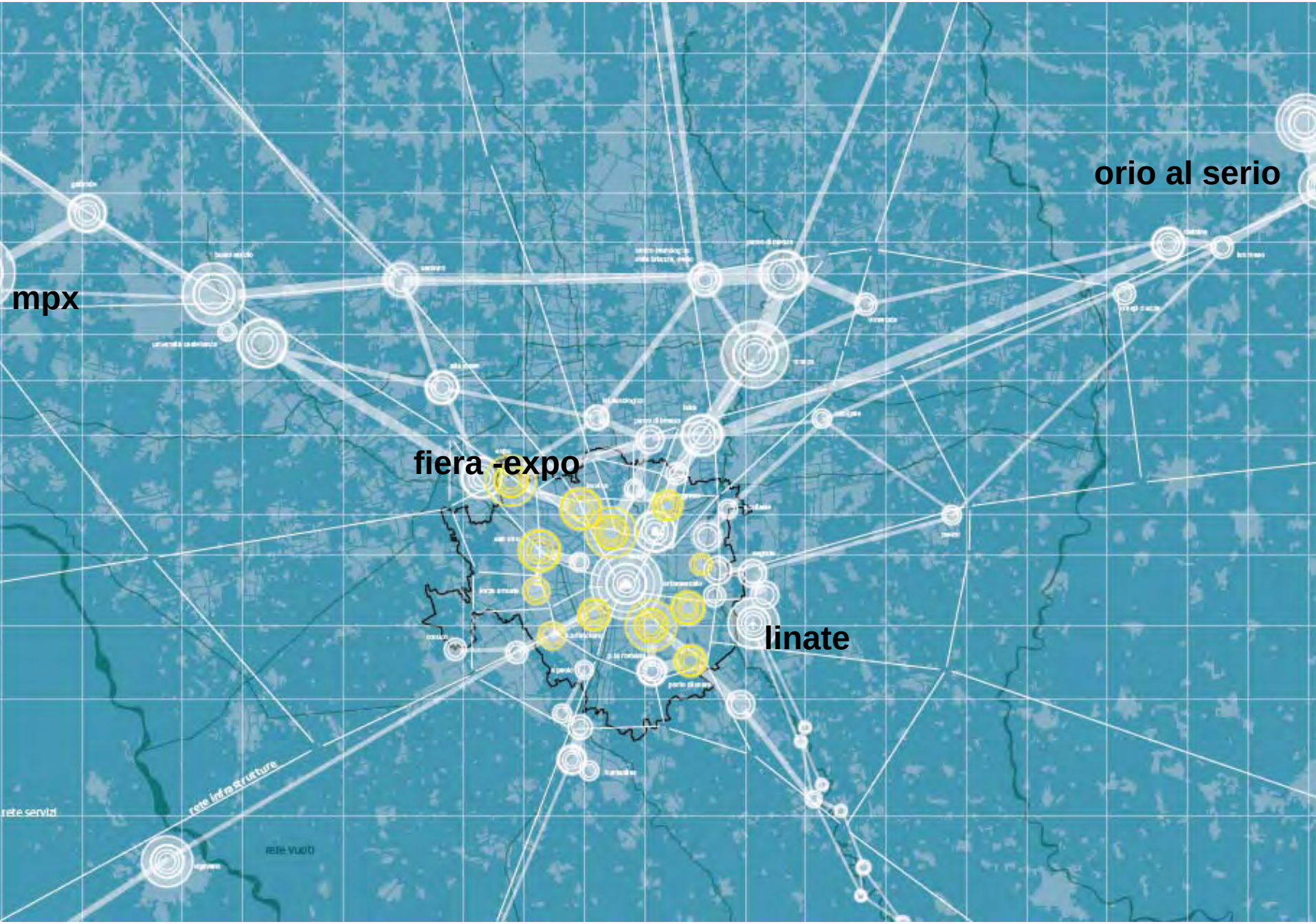
- new “foot of the mountains” railway connection for goods in the context of genova-rotterdam european corridor



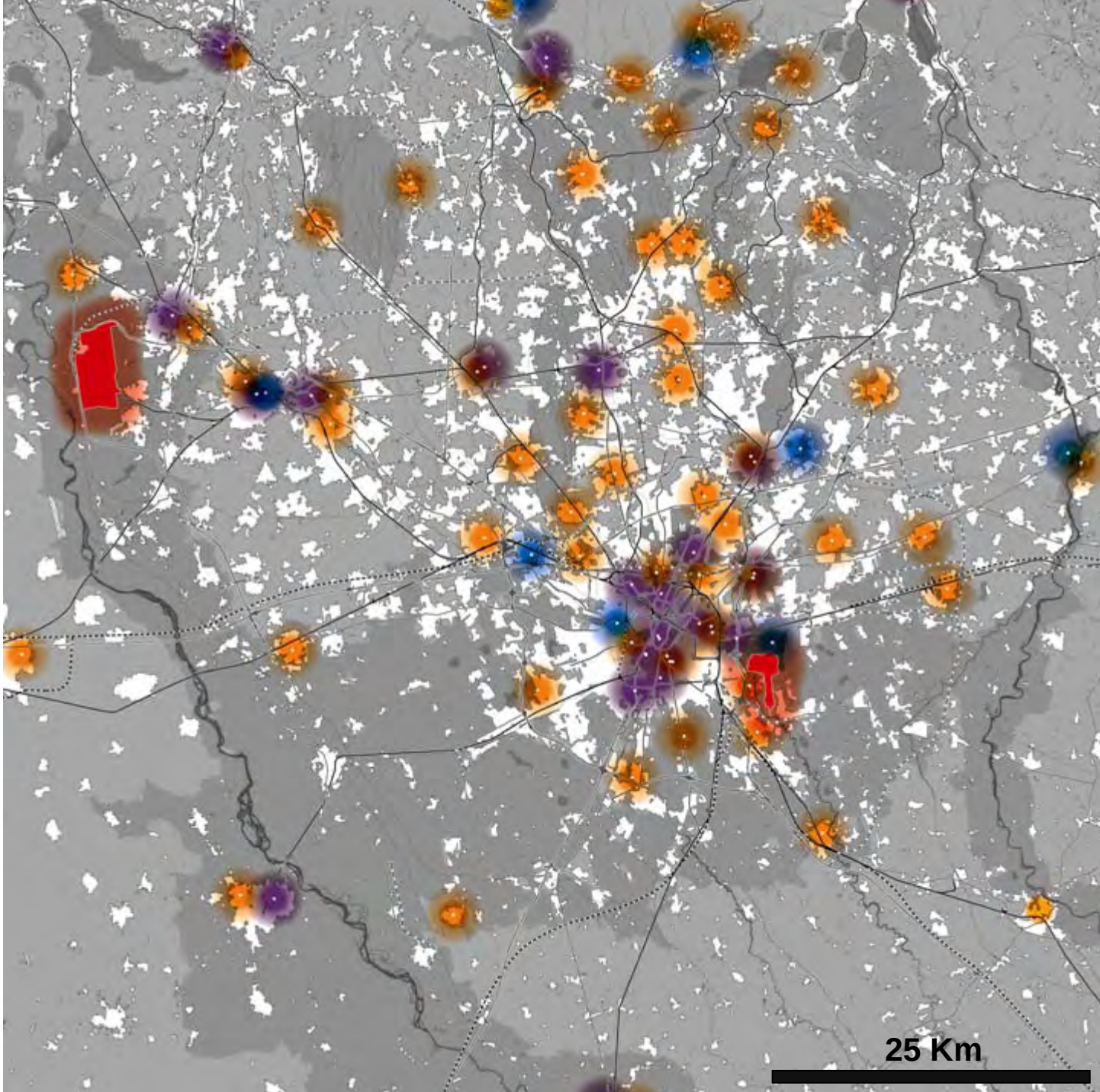
Simplon -Loetchberg
Gothard
MILANO
GENOVA

Simplon –Loetchberg
freight
Gothard
passegers
new “foot of the mountains”
for goods
railway connections
MILANO
NOVARA
GENOVA


varese
como
lecco
mpx
saronno
bergamo
milano
MILANO
linate
regional railway system
lodi
pavia
PAVIA
LODI
COMO
LECCO
S5 VARESE
S2 MARIANO C.
S4 CAMNAGO-LENTATE
S4 SEVESO
SEREGNO S9
S3 SARONNO
SARONNO S1
BOVISA S10
S6 NOVARA
S4 CADORNA
S3 CADORNA
S9 S. CRISTOFORO
P.TA VITTORIA S2 S1 S6 S10
PIOLTELLO L. S5
Consulta ogni informazione sul sito
www.trasporti.regione.lombardia.it


orio al serio
mpx
fiera -expo
linate
rete infrastrutture
rete servizi
rete viaria

## strategic functions

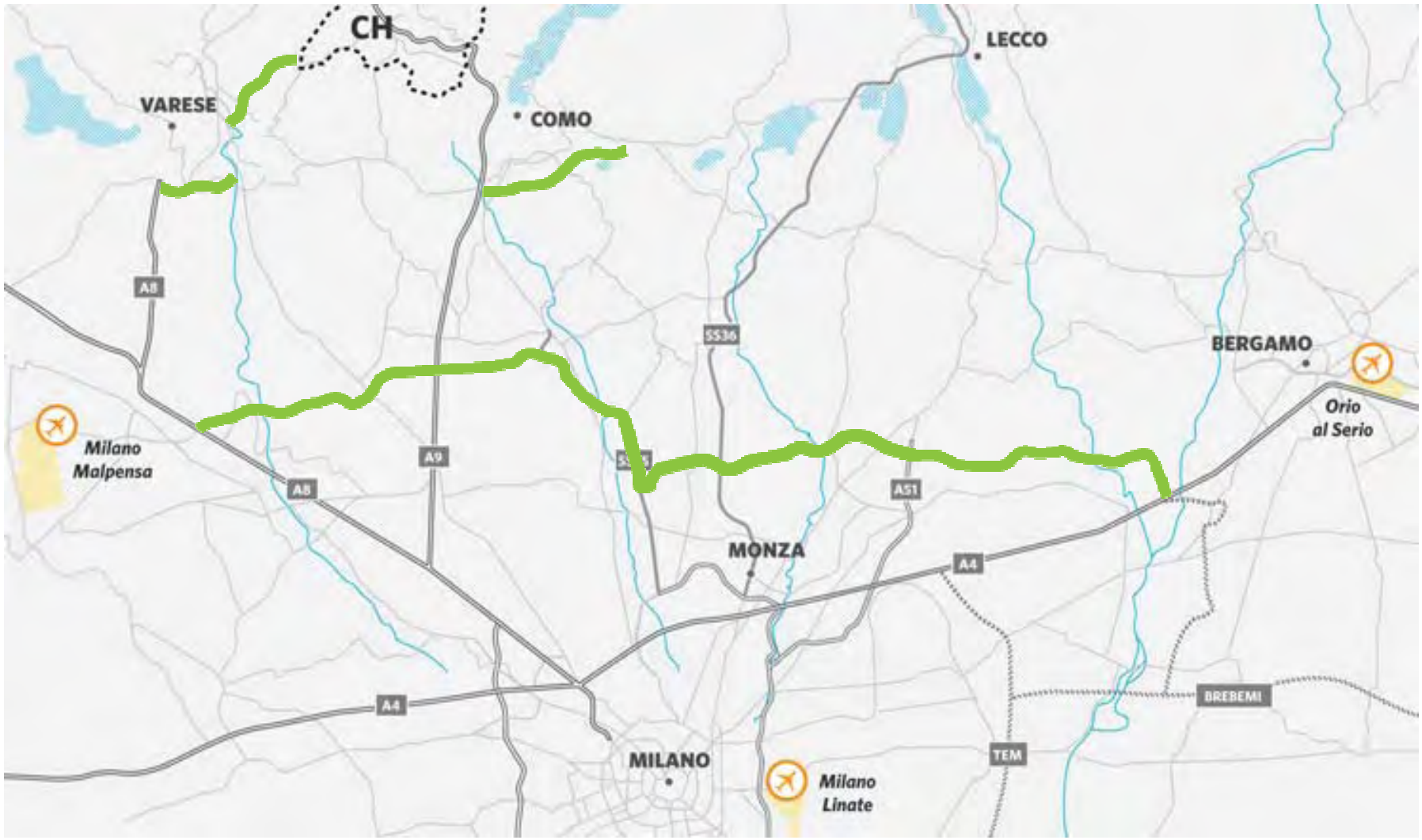



Convention centers
Hospitals
Universities
Airports

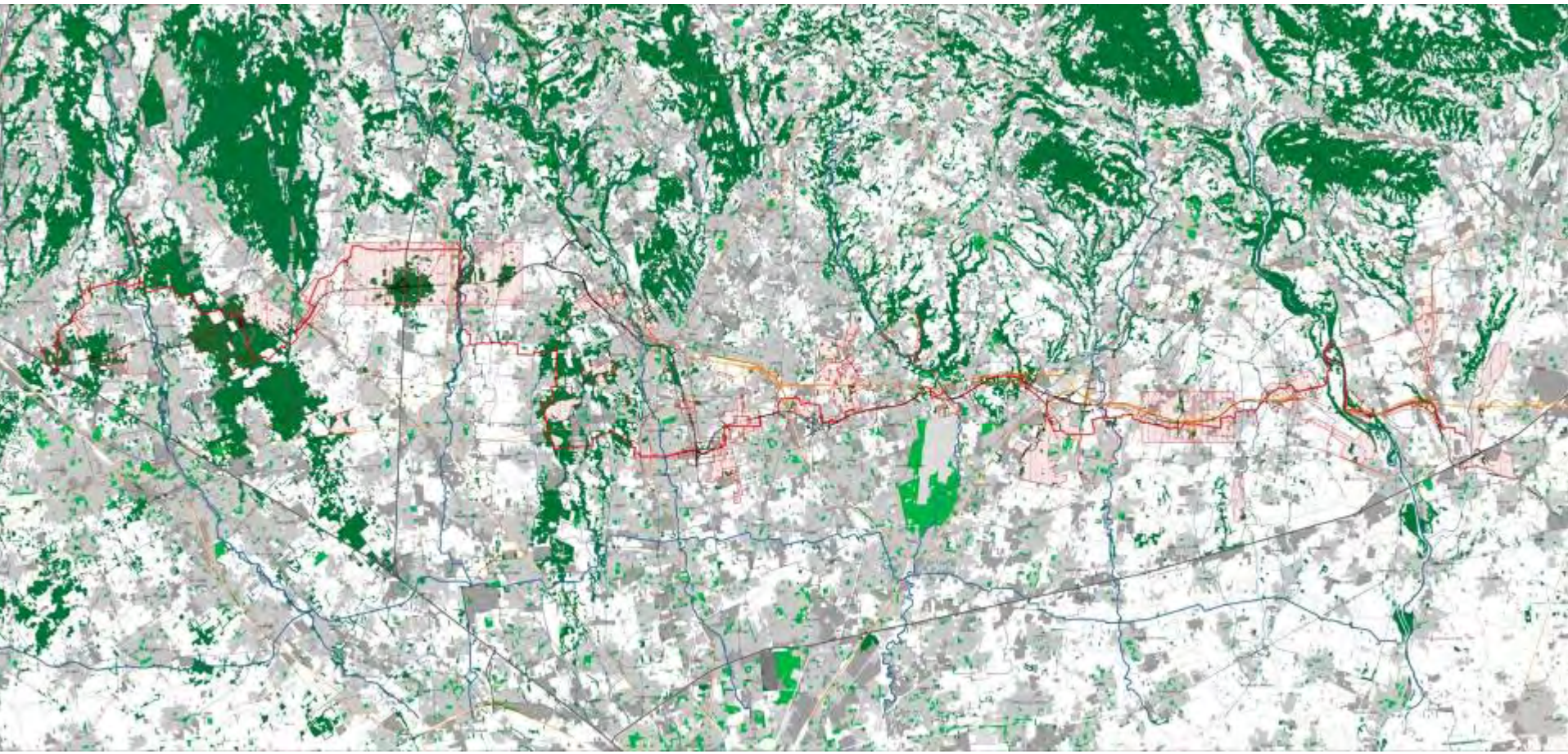
- **new Pedemontana (foot of the mountains) highway and greenway**

Autostrada Pedemontana Lombarda

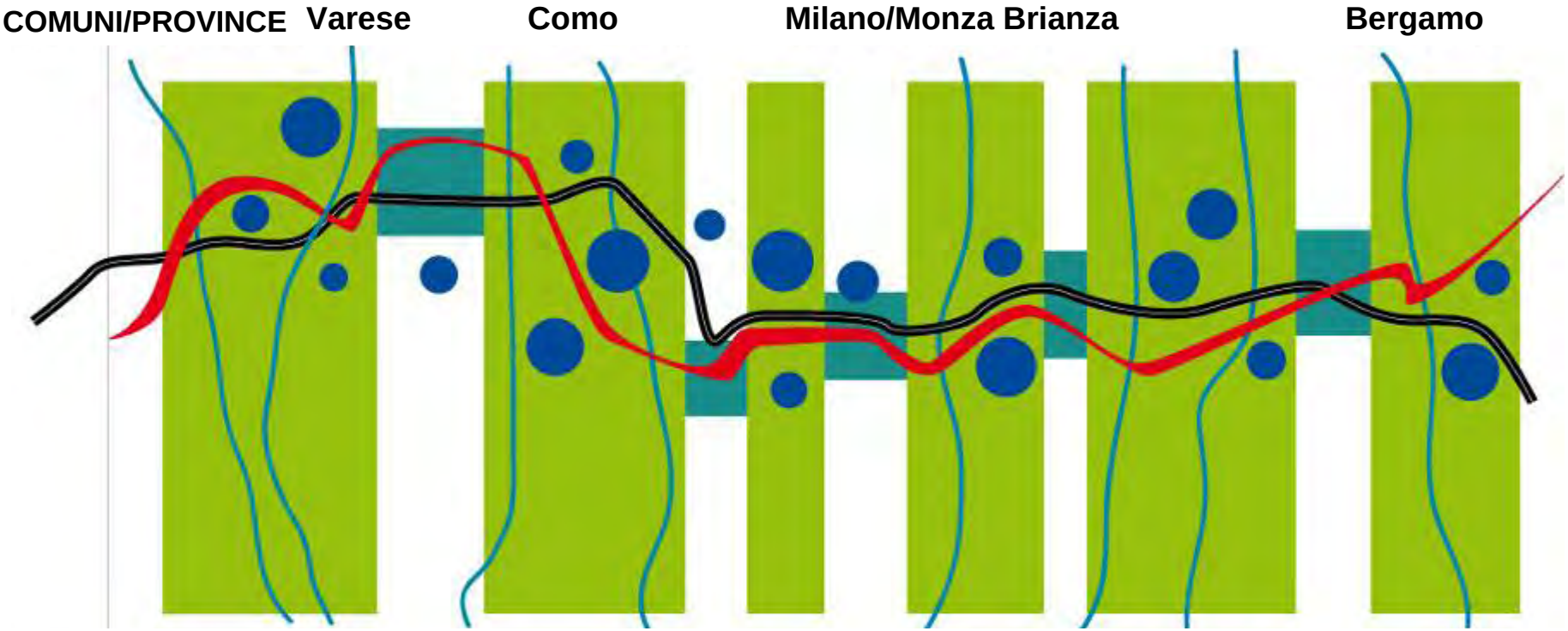
**87 km** New highway | **70 km** New local road | **200 mila** Vehicles a day



# Connections with regional parks, rivers and canals in the North Milan conurbation



# masterplan: structure
## highway + greenway



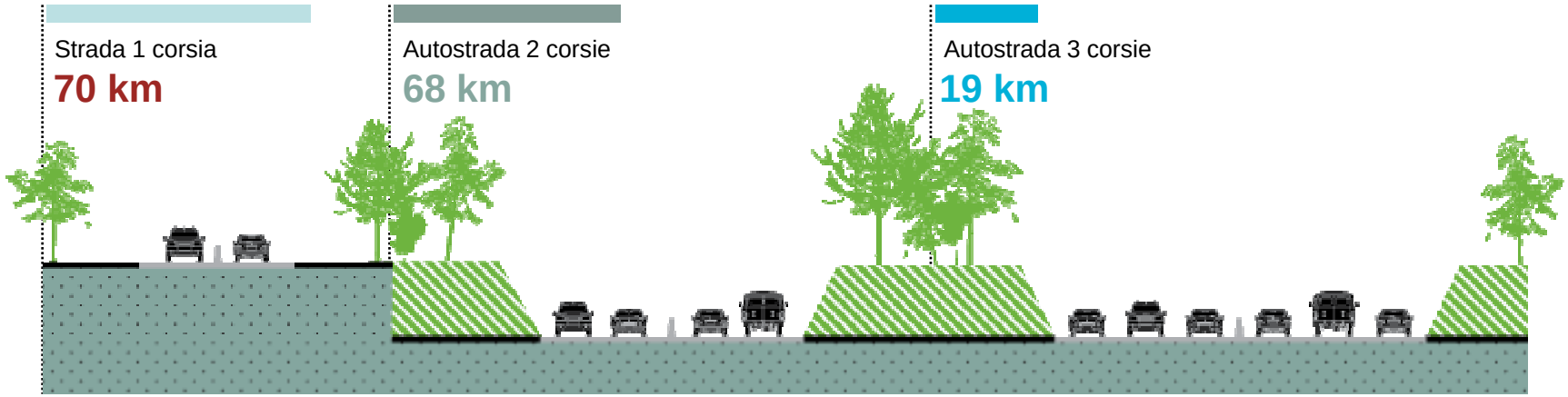
# GREENWAY

- linear park connecting metropolitan open spaces
- connection between stations, facilities and historic centers
- bike path and a new green strip 90 Km ,5 - 50 m wide, estimated cost 35 millions €

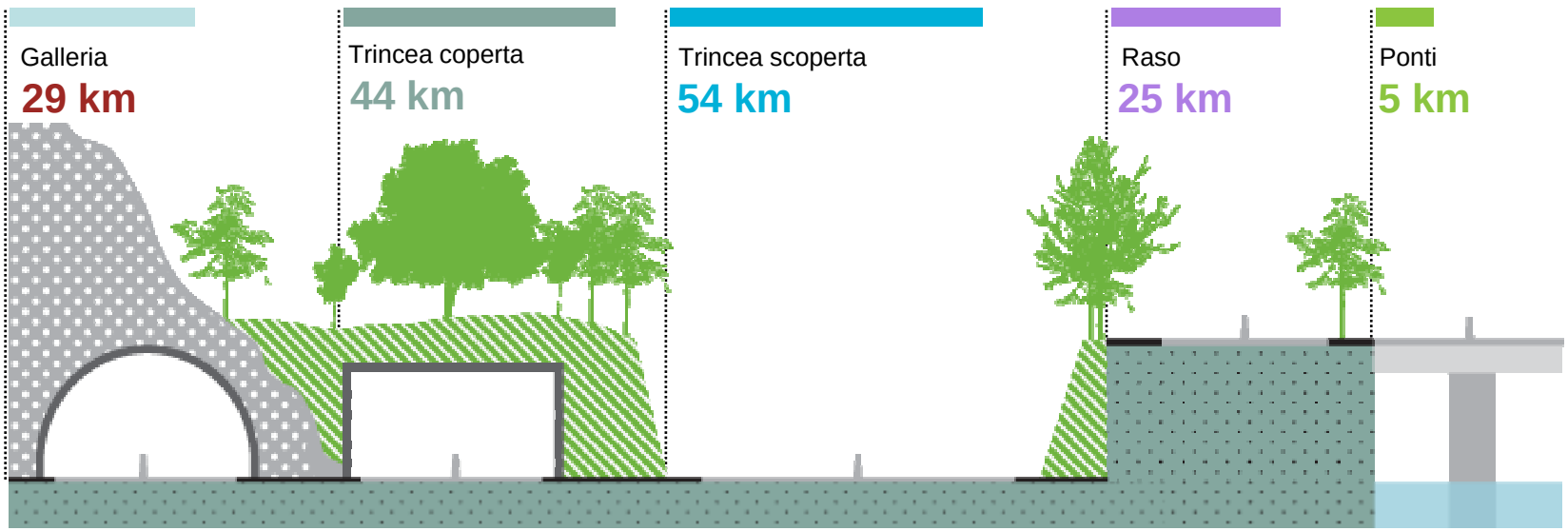
# typologies of sections

Autostrada Pedemontana Lombarda

## NUMERO DI CORSIE



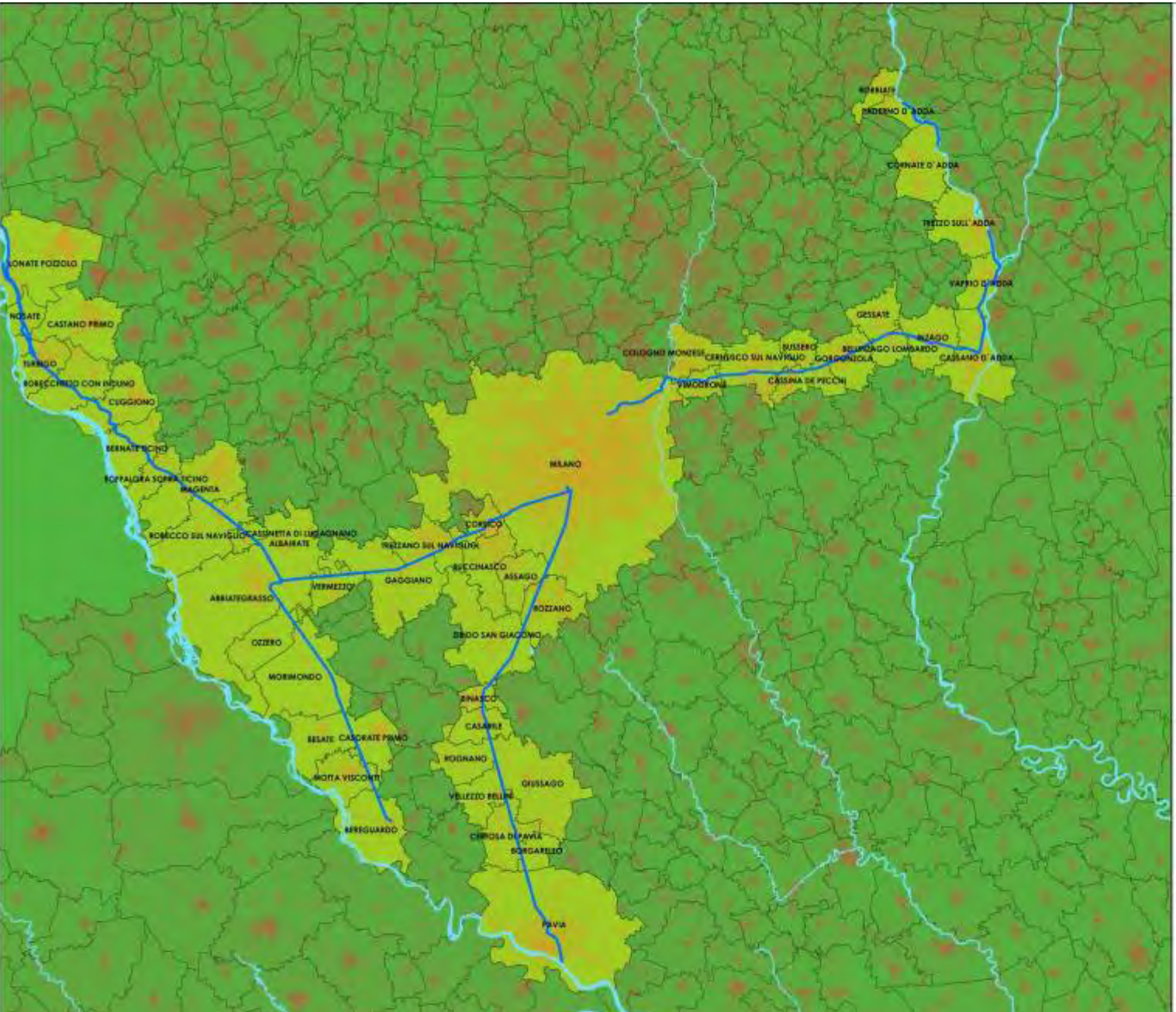

## TIPOLOGIE DI TRACCIATO



# typologies of interventions

- urban park
- urban forest
- agricolture
- connections
- forests
- environmental renewal
- rural landscape renewal

- **navigli (historic canals) regional plan**




RegioneLombardia

*Territorio e Urbanistica*

## *PTRA4 Navigli*
## *Ambito del Piano d'Area*

**Legenda**

- Navigli
- Fiumi
- Comuni del Sistema Navigli

1:250.000

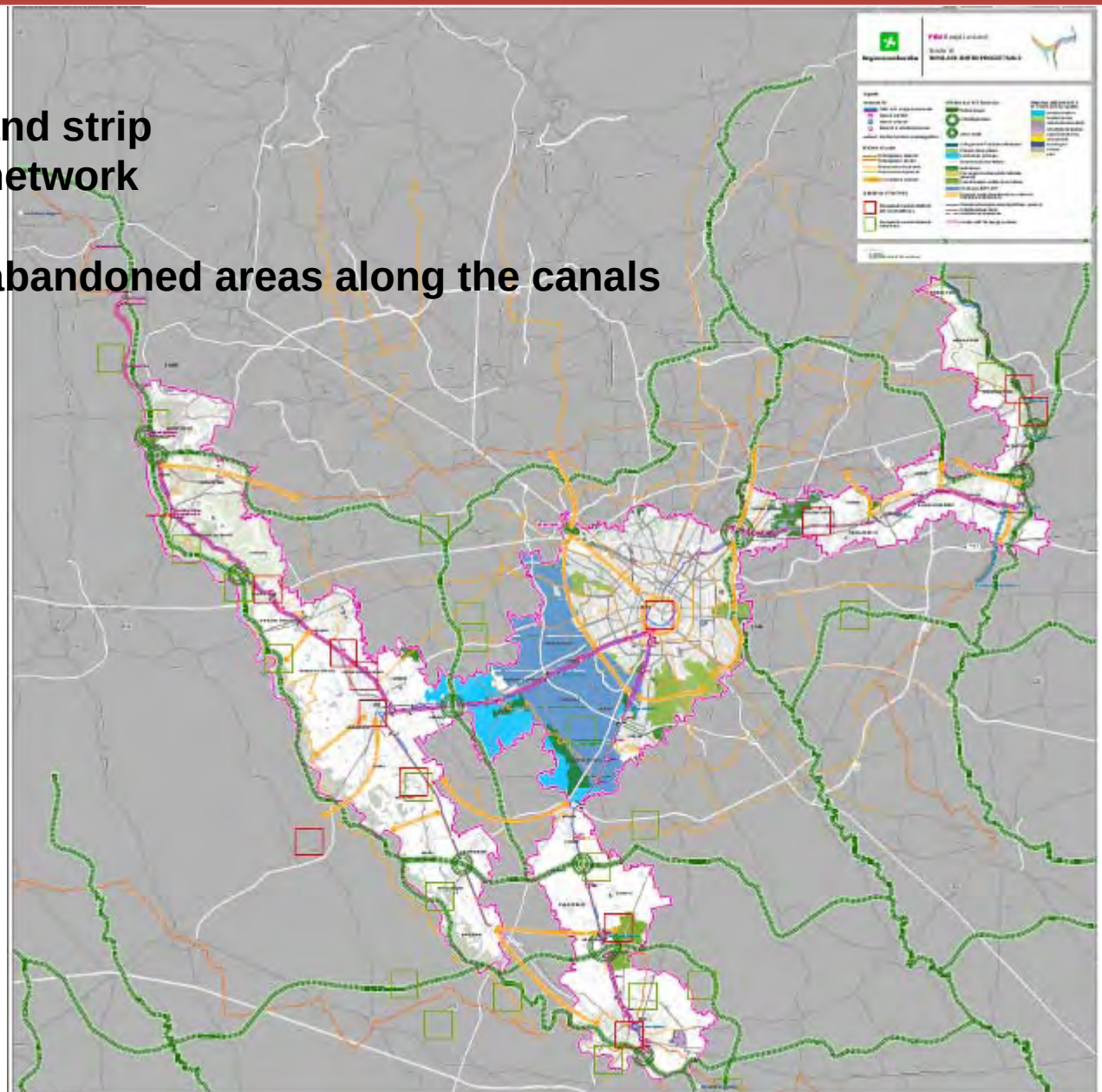
N

W E

# Piano Territoriale Regionale d'Area Navigli Lombardi

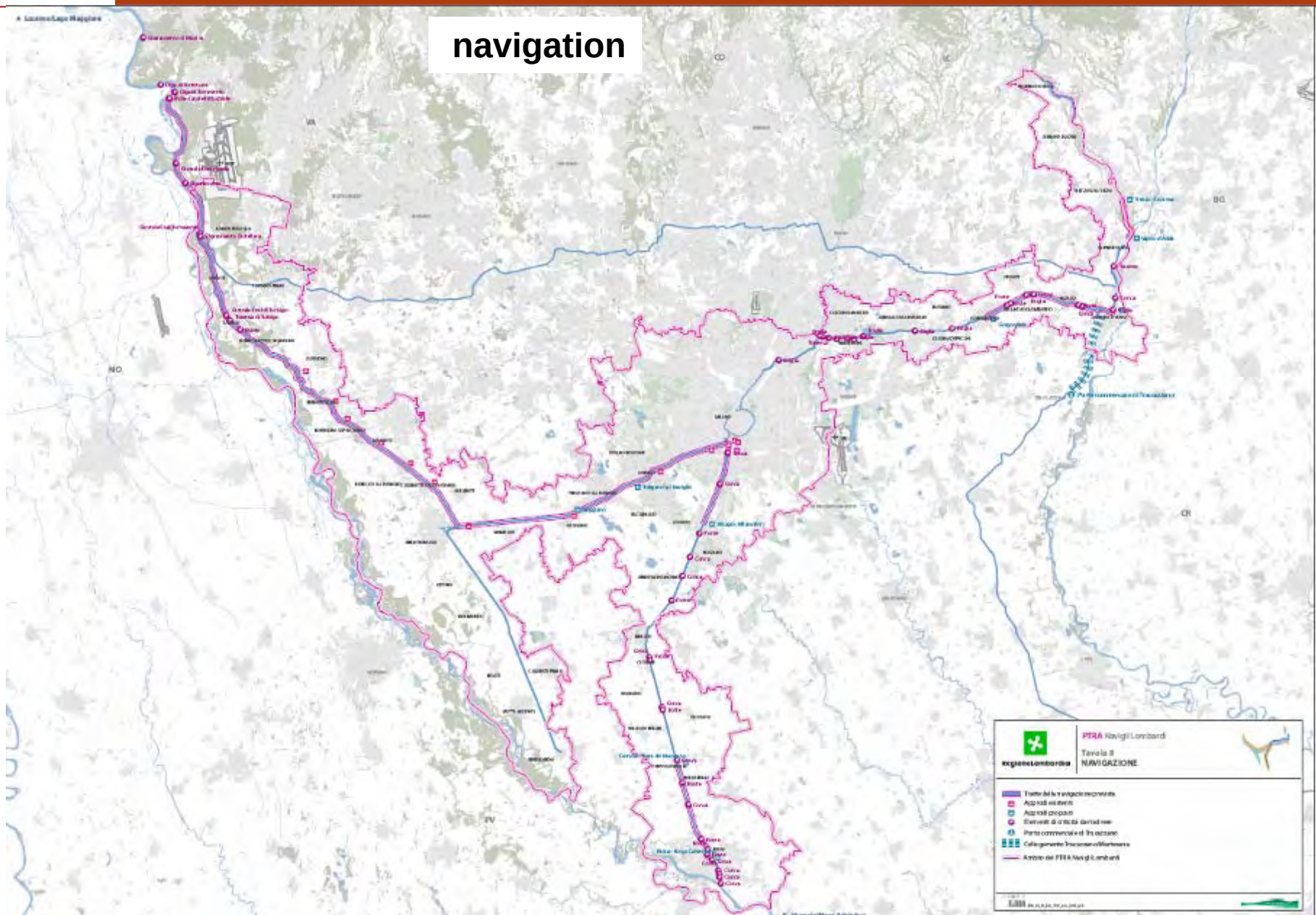
# Piano Territoriale Regionale d'Area Navigli Lombardi

- navigation
- protected land strip
- ecological network
- bike paths
- renewal of abandoned areas along the canals

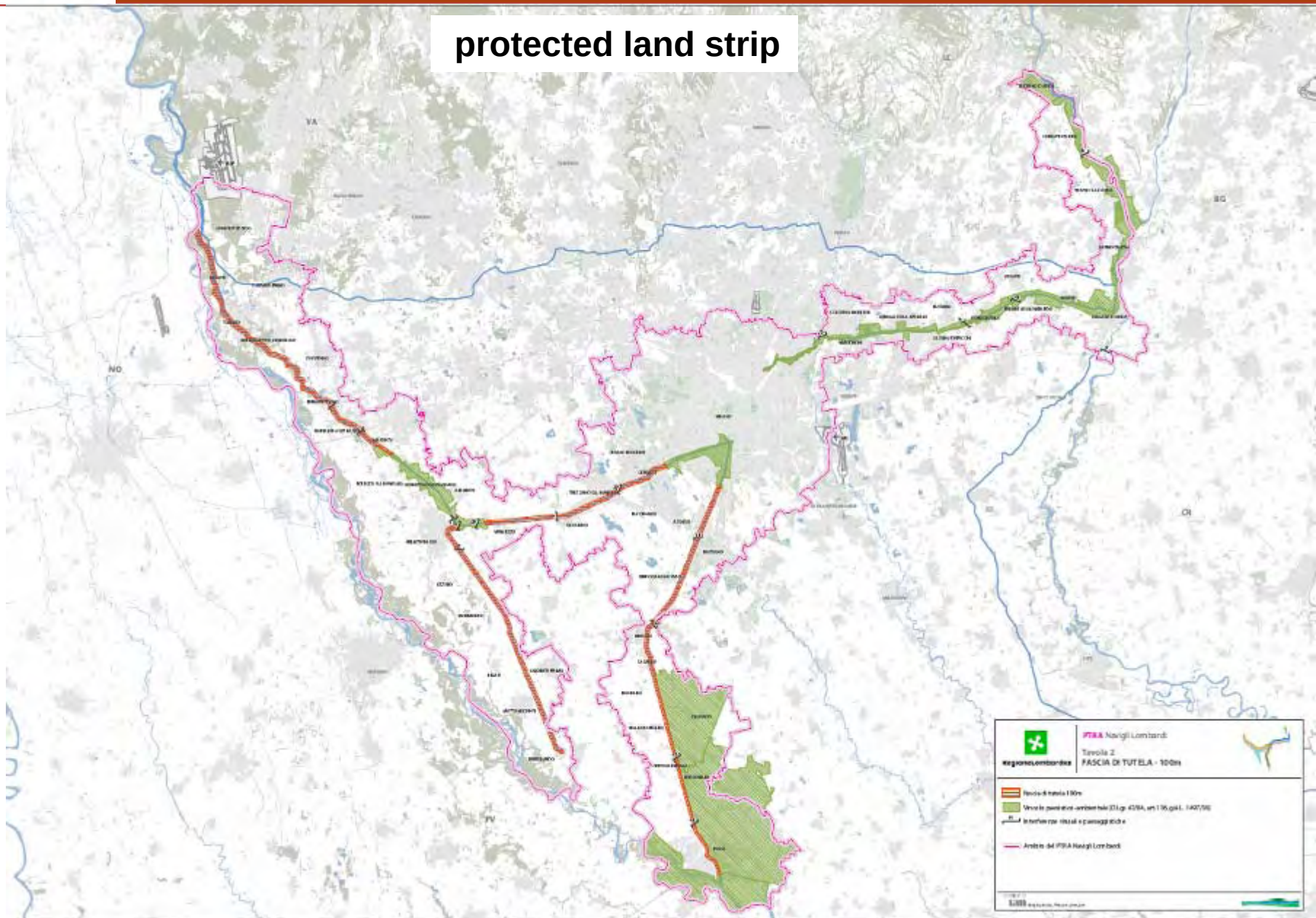


# Piano Territoriale Regionale d'Area Navigli Lombardi

**navigation**

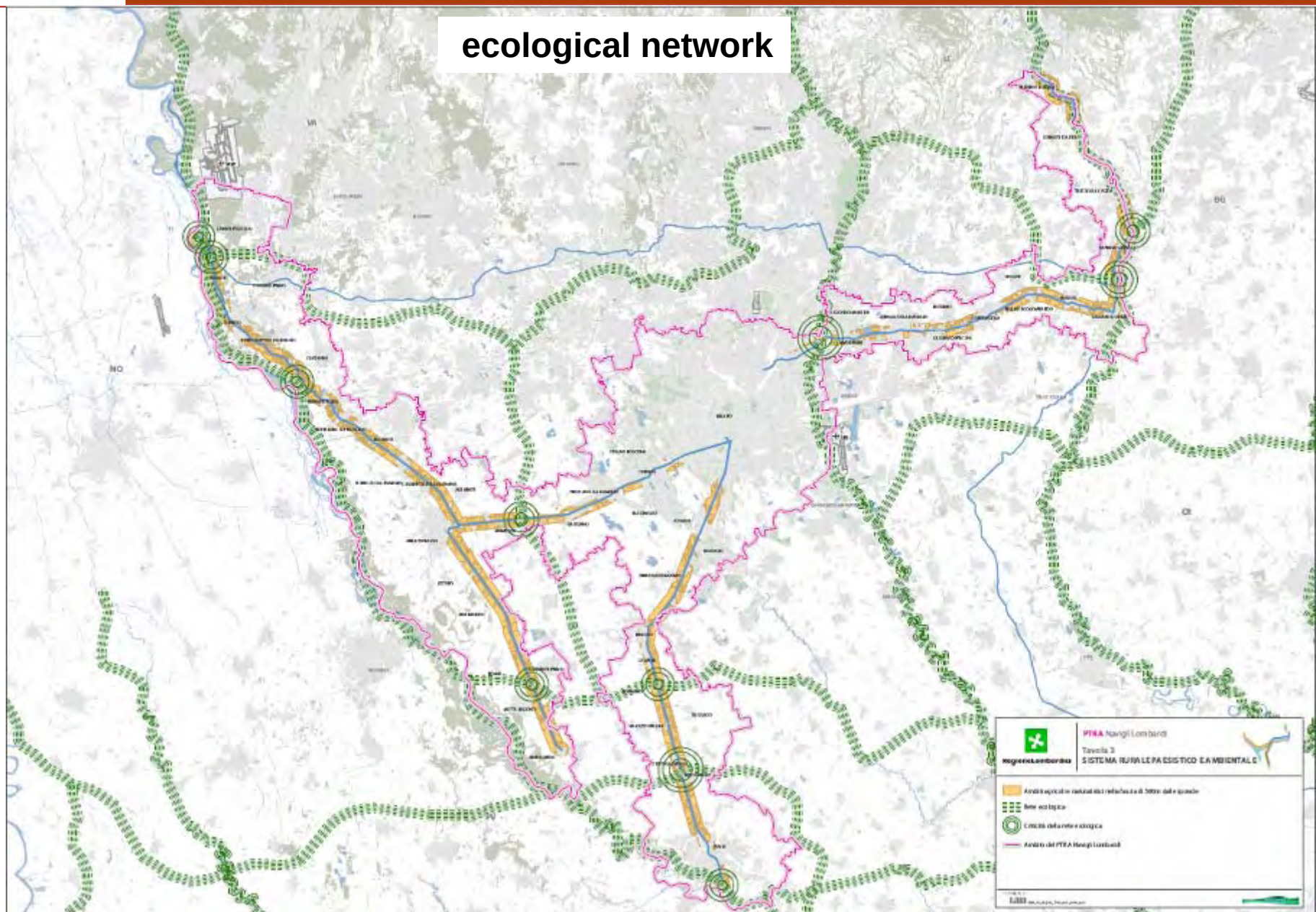


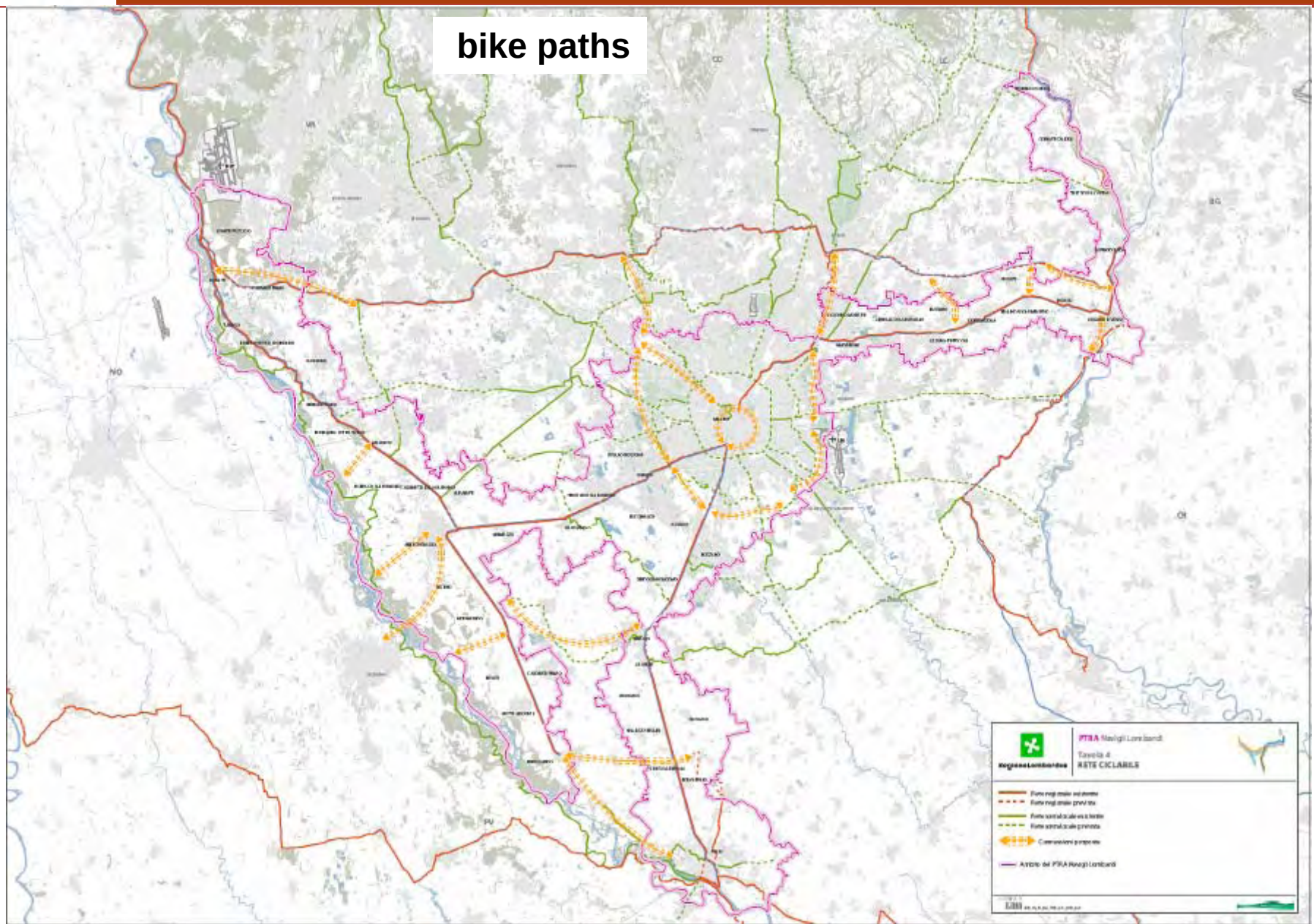
**protected land strip**



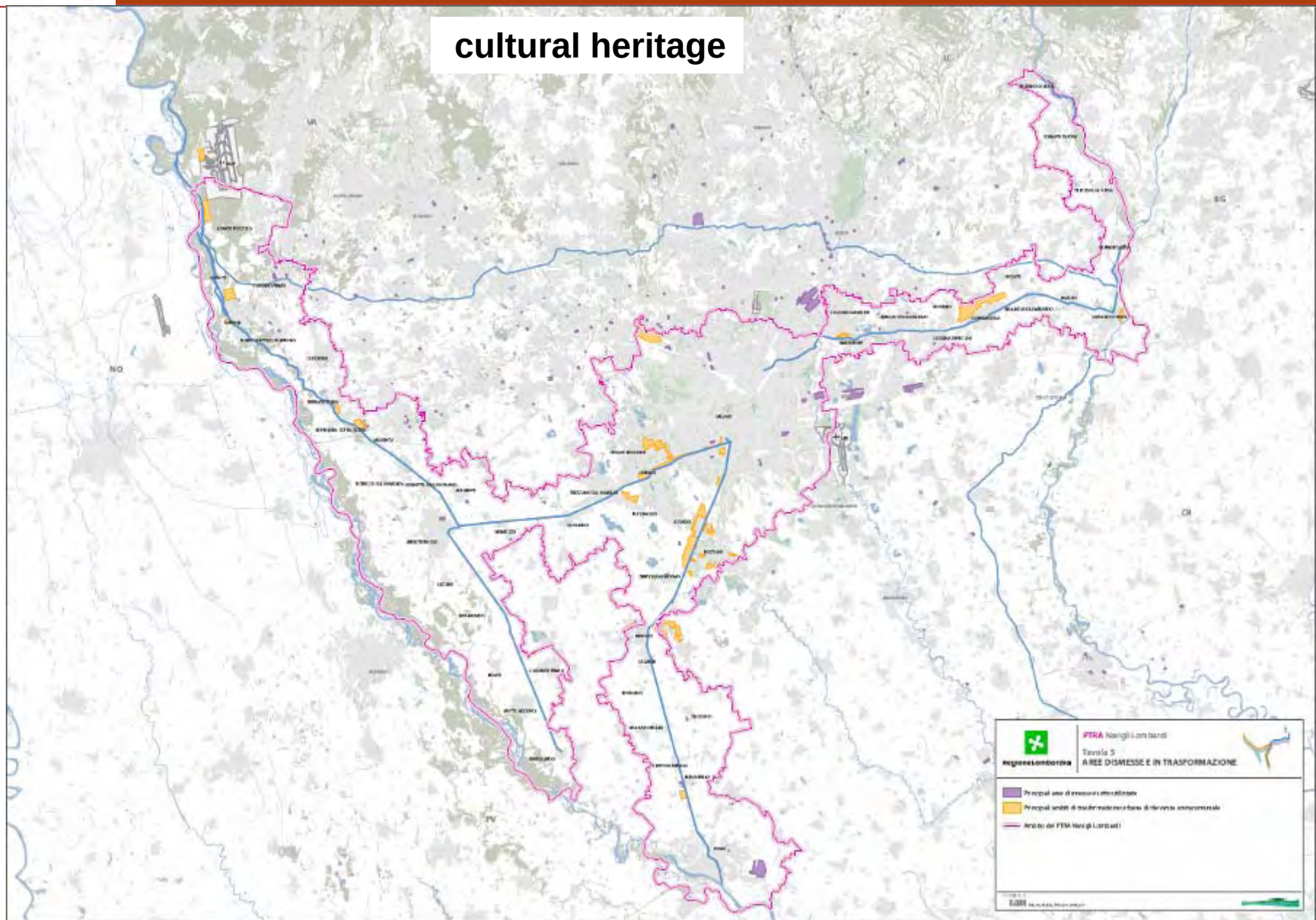
# Piano Territoriale Regionale d'Area Navigli Lombardi

## ecological network

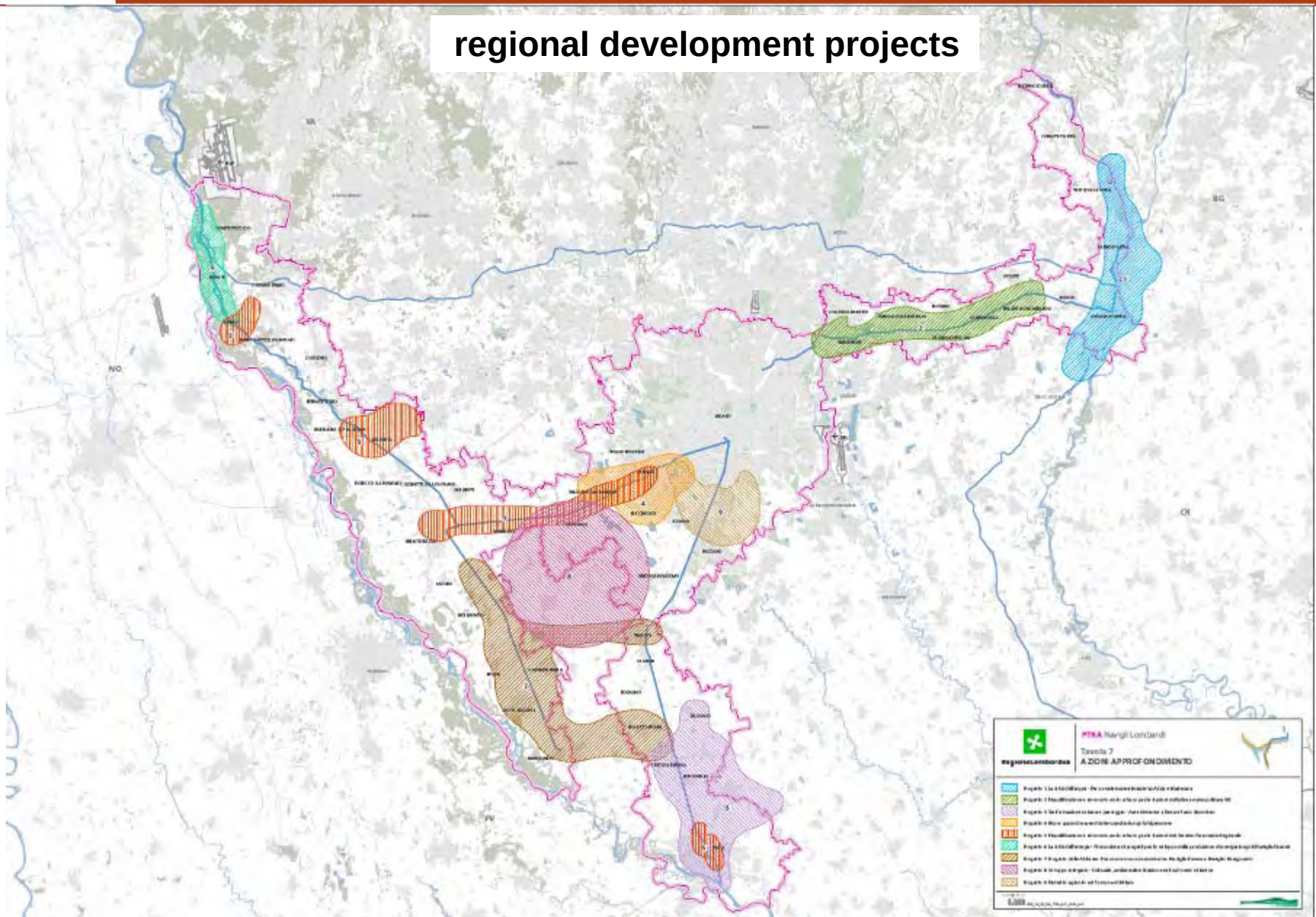



bike paths

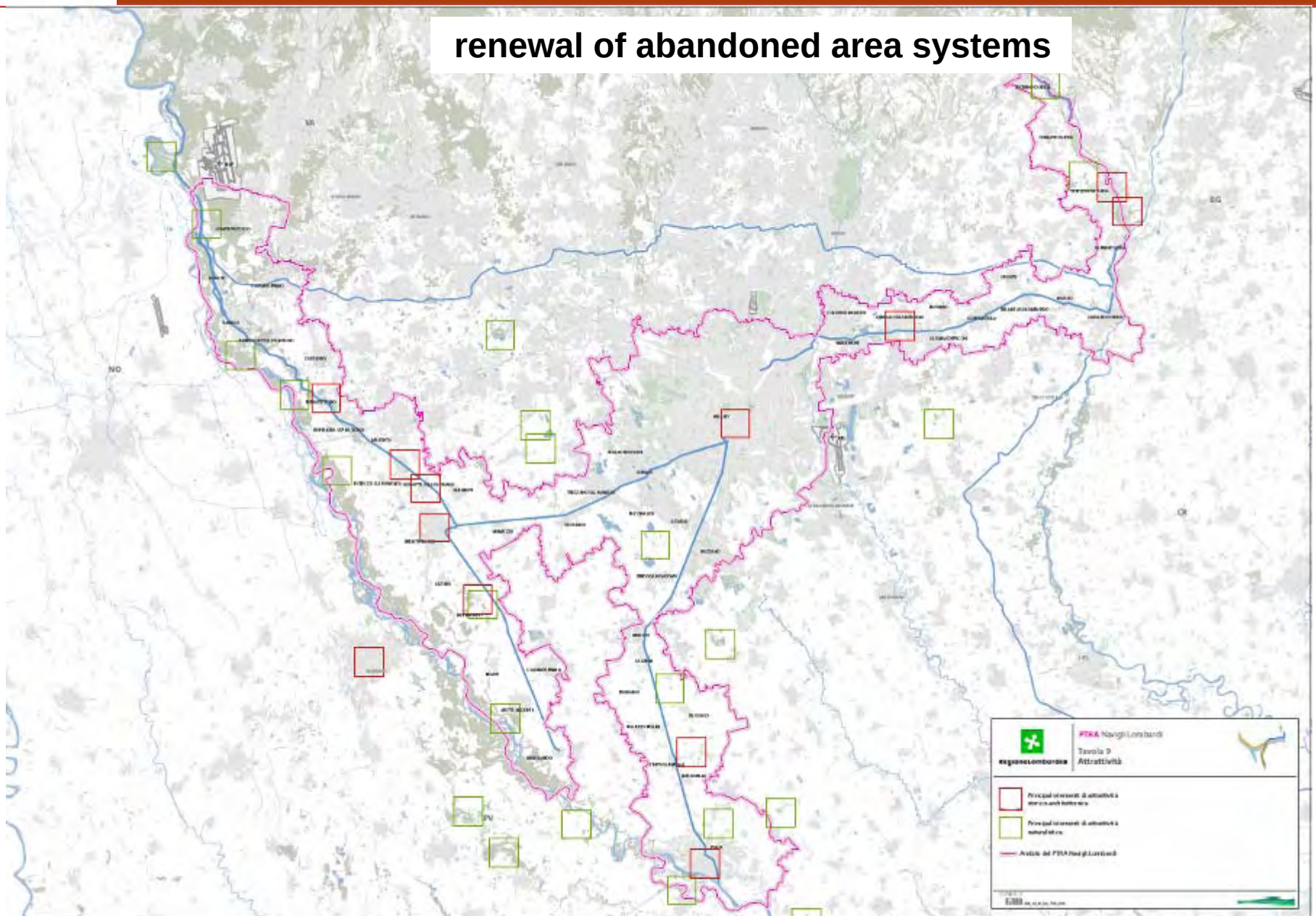
## cultural heritage



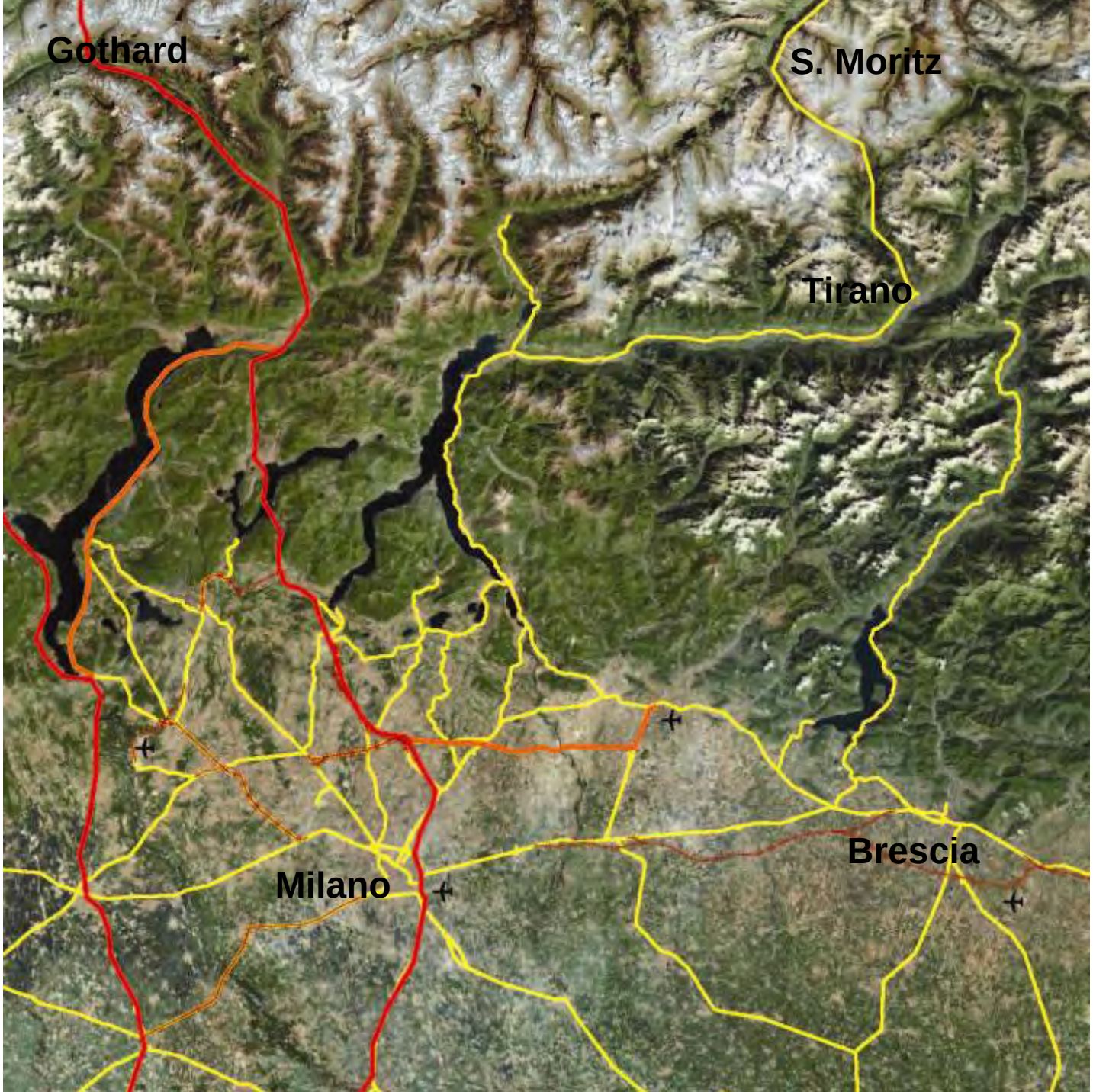
## regional development projects

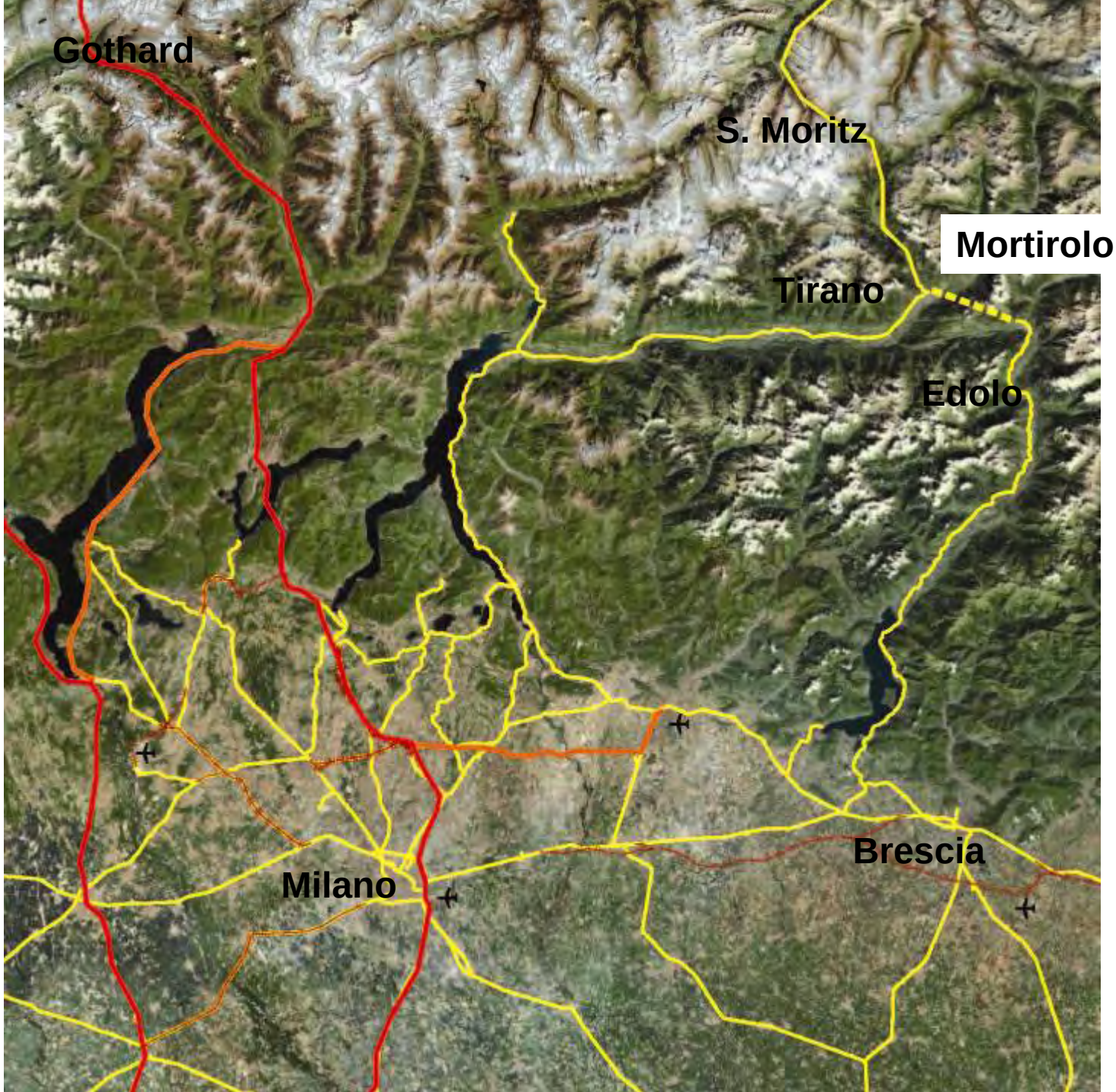


**renewal of abandoned area systems**

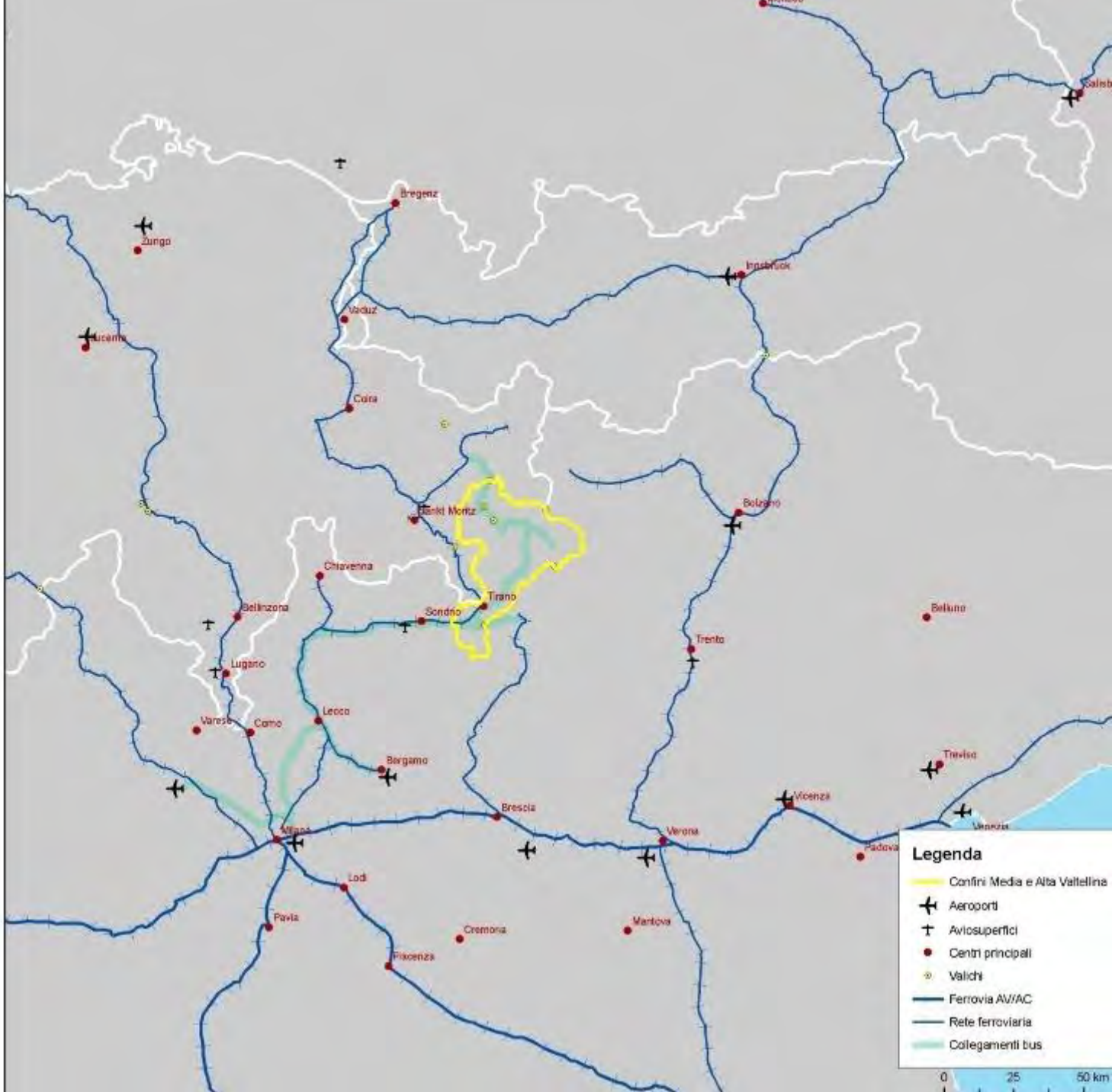


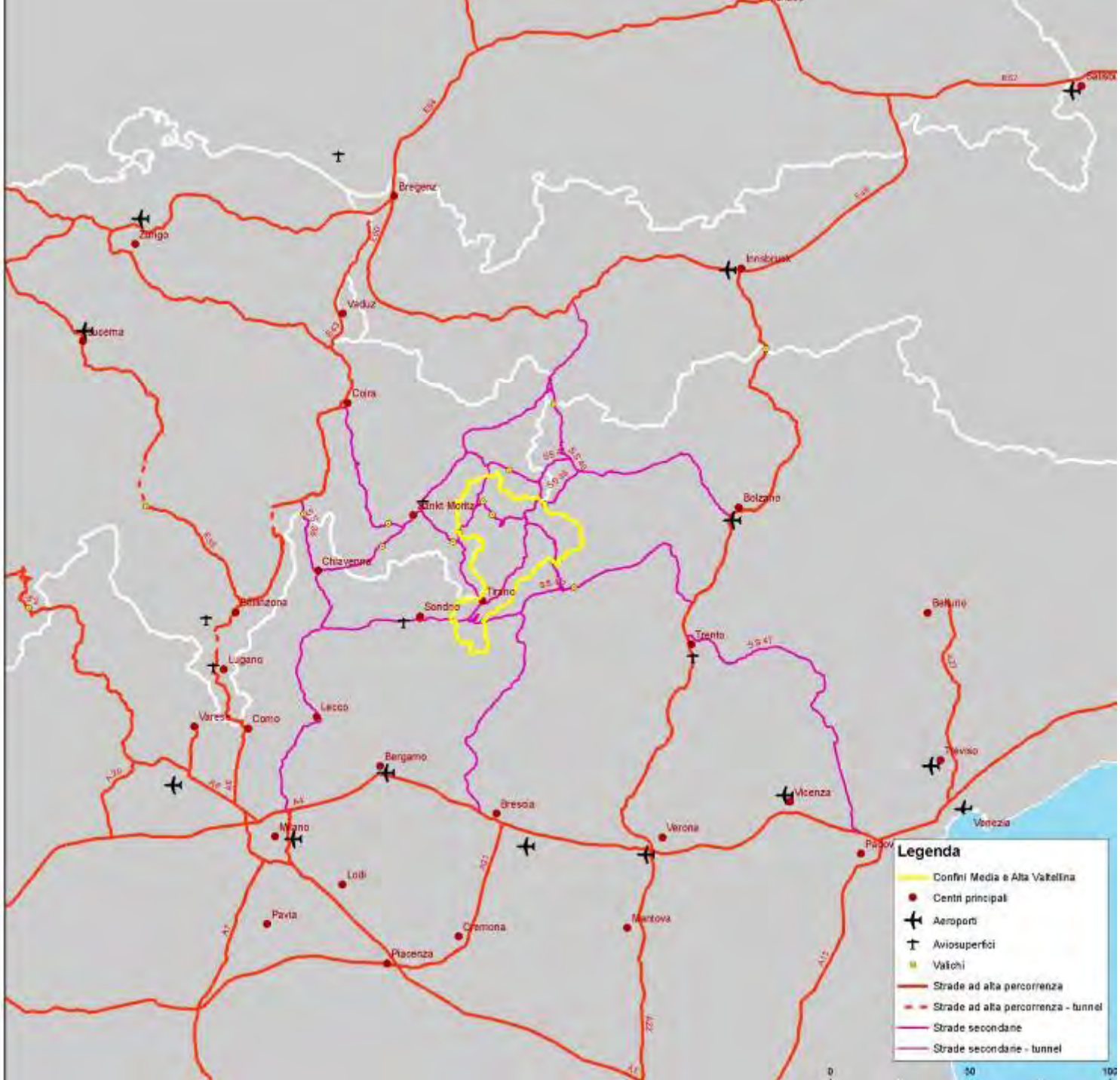
- **valtellina regional plan**


Gothard
S. Moritz
Tirano
Brescia
Milano


Gothard
S. Moritz
Mortirolo tunnel
10 km
Tirano
Edolo
Brescia
Milano

Rhätische Bahn
43


Bregenz
Zurigo
Innsbruck
Vaduz
Lucerna
Coira
Bolzano
Saint Moritz
Chiavenna
Tirano
Sondrio
Bellinzona
Belluno
Trento
Lugano
Varese
Como
Lecco
Bergamo
Treviso
Vicenza
Brescia
Milano
Verona
Padova
Lodi
Pavia
Cremona
Mantova
Piacenza
Legenda
Confini Media e Alta Valtellina
Aeroporti
Aviosuperfici
Centri principali
Valichi
Ferrovia AV/AC
Rete ferroviaria
Collegamenti bus
0
25
50 km


Bregenz
Zurigo
Lucerna
Coira
Innsbruck
Vaduz
Bolzano
Sankt Moritz
Chiavenna
Bellinzona
Sondrio
Trento
Belluno
Lugano
Lecco
Varese
Como
Bergamo
Brescia
Milano
Verona
Vicenza
Treviso
Venezia
Padova
Lodi
Pavia
Cremona
Mantova
Piacenza
Legenda
Confini Media e Alta Valtellina
Centri principali
Aeroporti
Aviosuperfici
Valichi
Strade ad alta percorrenza
Strade ad alta percorrenza - tunnel
Strade secondarie
Strade secondarie - tunnel

- **the new City Plan: vision and structure**
- **great  projects of public interest:**
  - ❑ **inter- neighbourhood road and greenway**
  - ❑ **railway circle line**
  - ❑ **west park**
  - ❑ **san siro project**
  - ❑ **expo project**

4

**Initiatives at the urban scale**

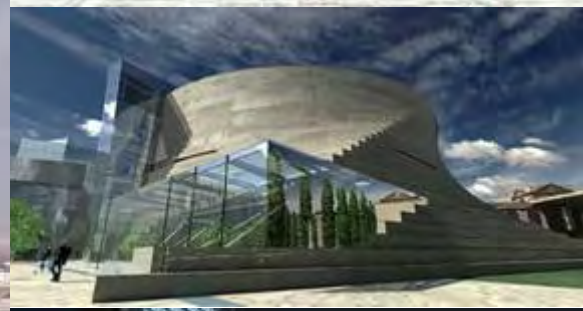
- **Milano**

**new City Plan**

**objectives:**
**making Milano**
**more attractive and liveable**
**•Milano per scelta**
**•Milano da vivere**
**sustainable competitiveness**

**Structure:**
**centers and network**

**CityLife**



# Fashion City

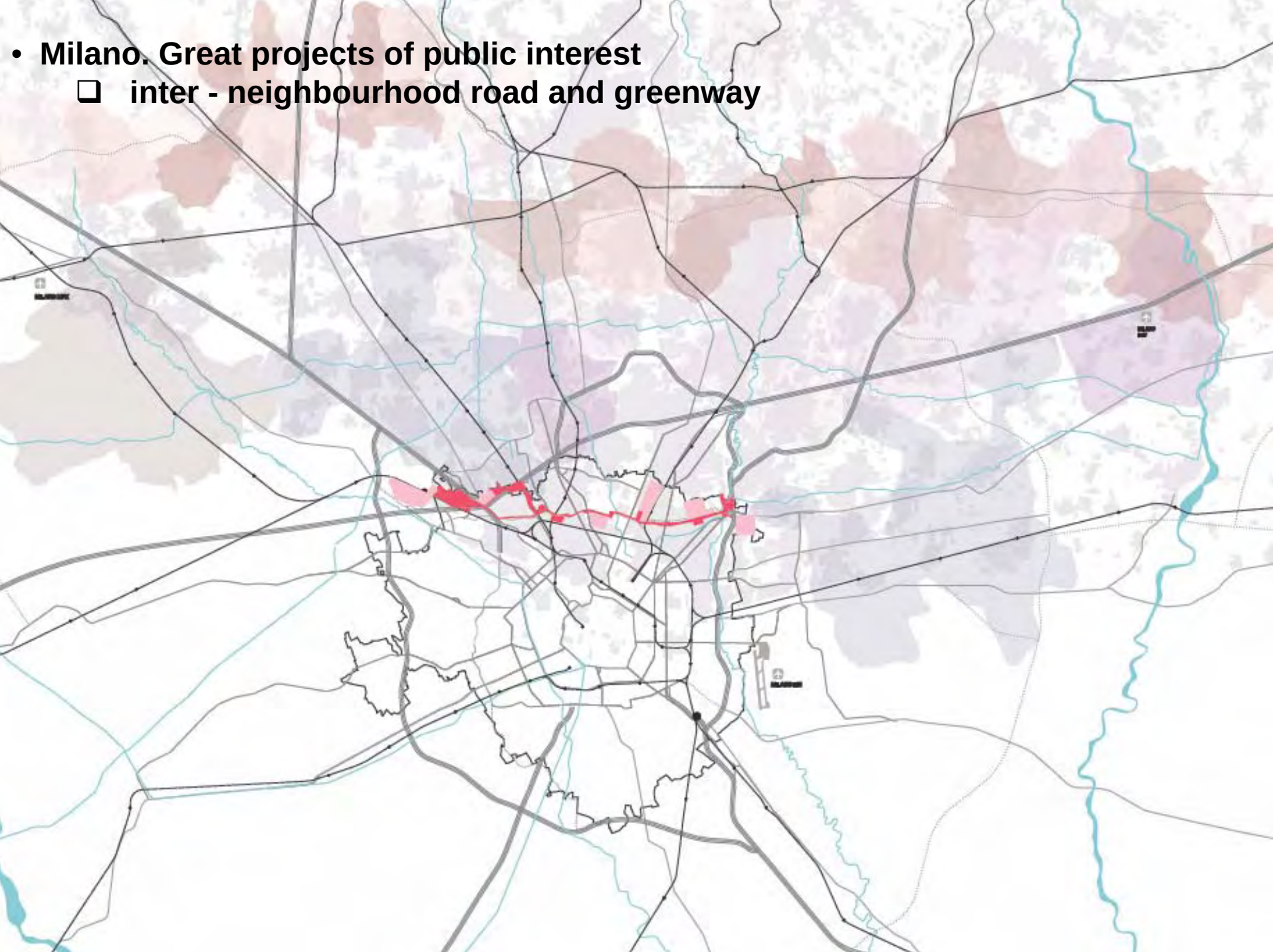
# Milano.  the new centres

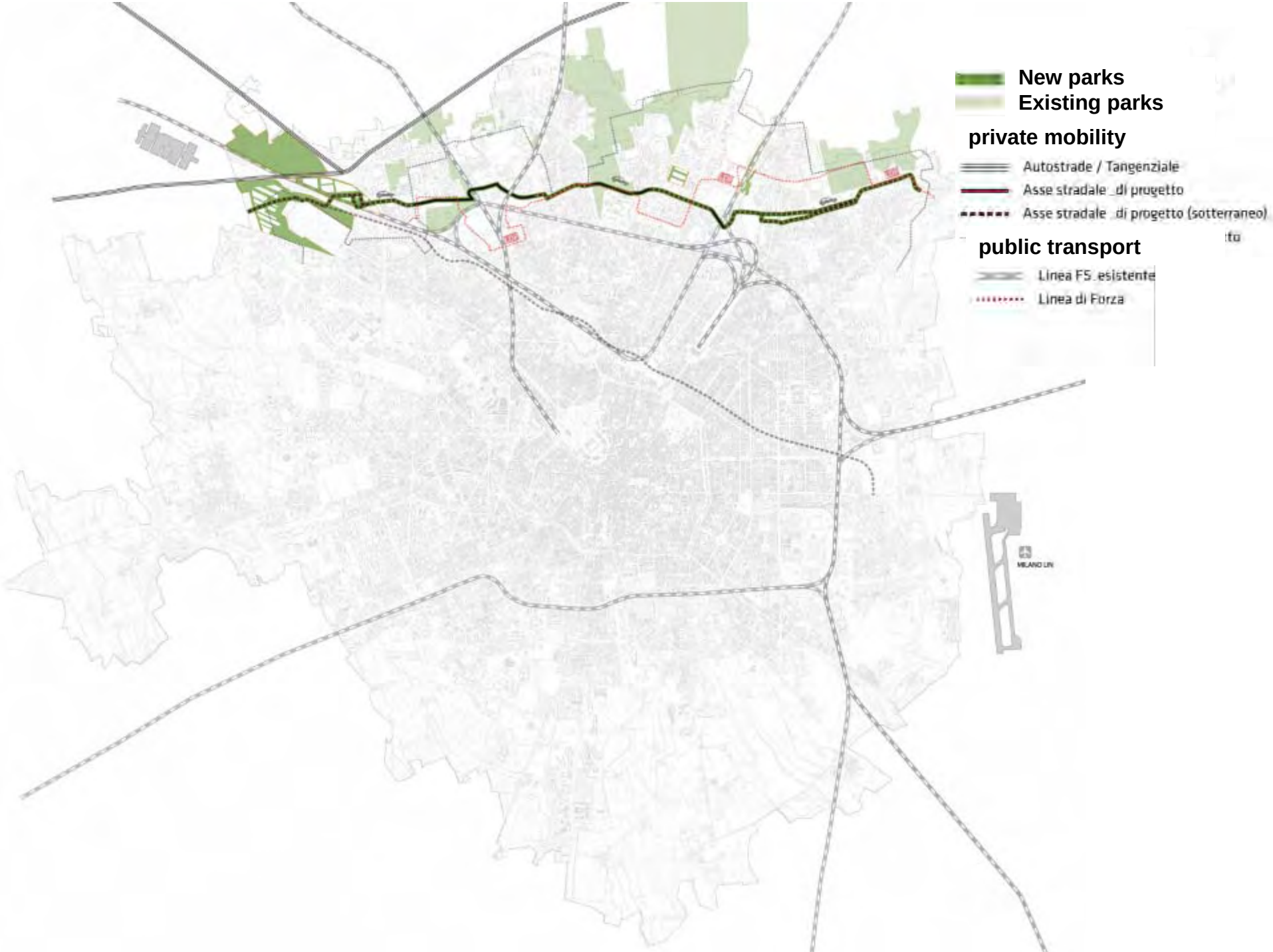
# the new network model for mobility flows

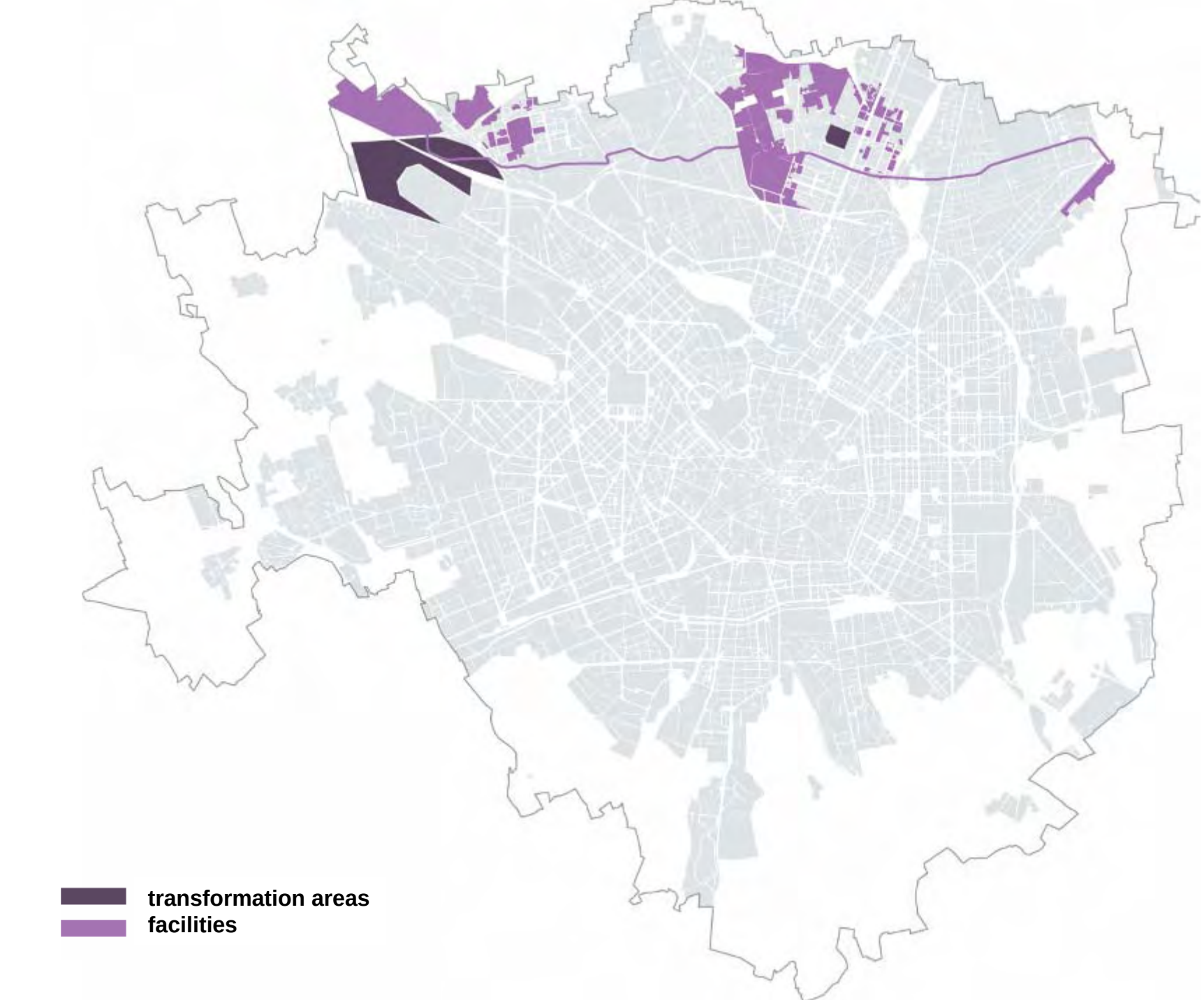
# the new network model for parks and greenways

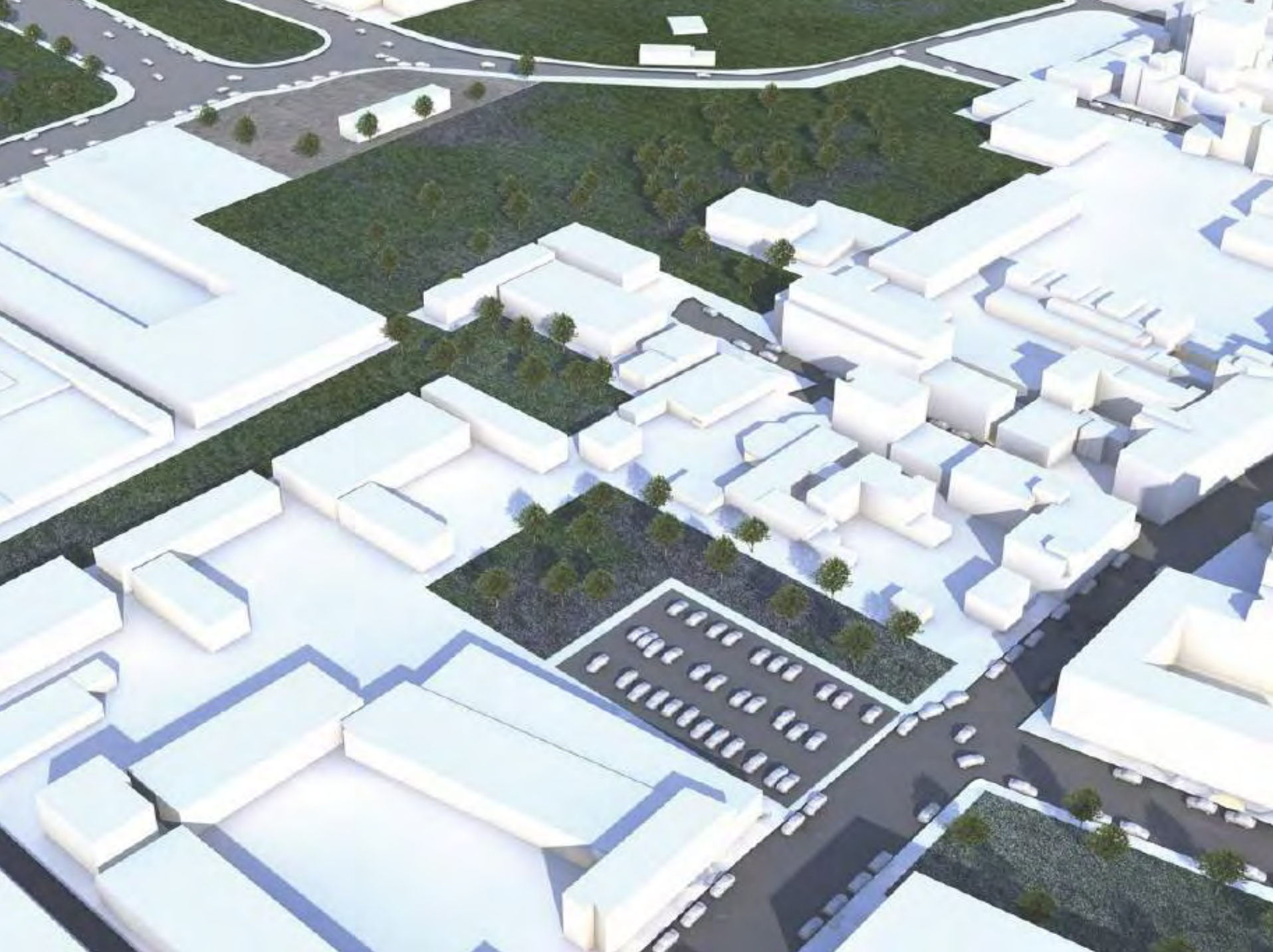
new service network based on
local identity nucleus

- **Milano. Great projects of public interest**
  - ❑ **inter - neighbourhood road and greenway**

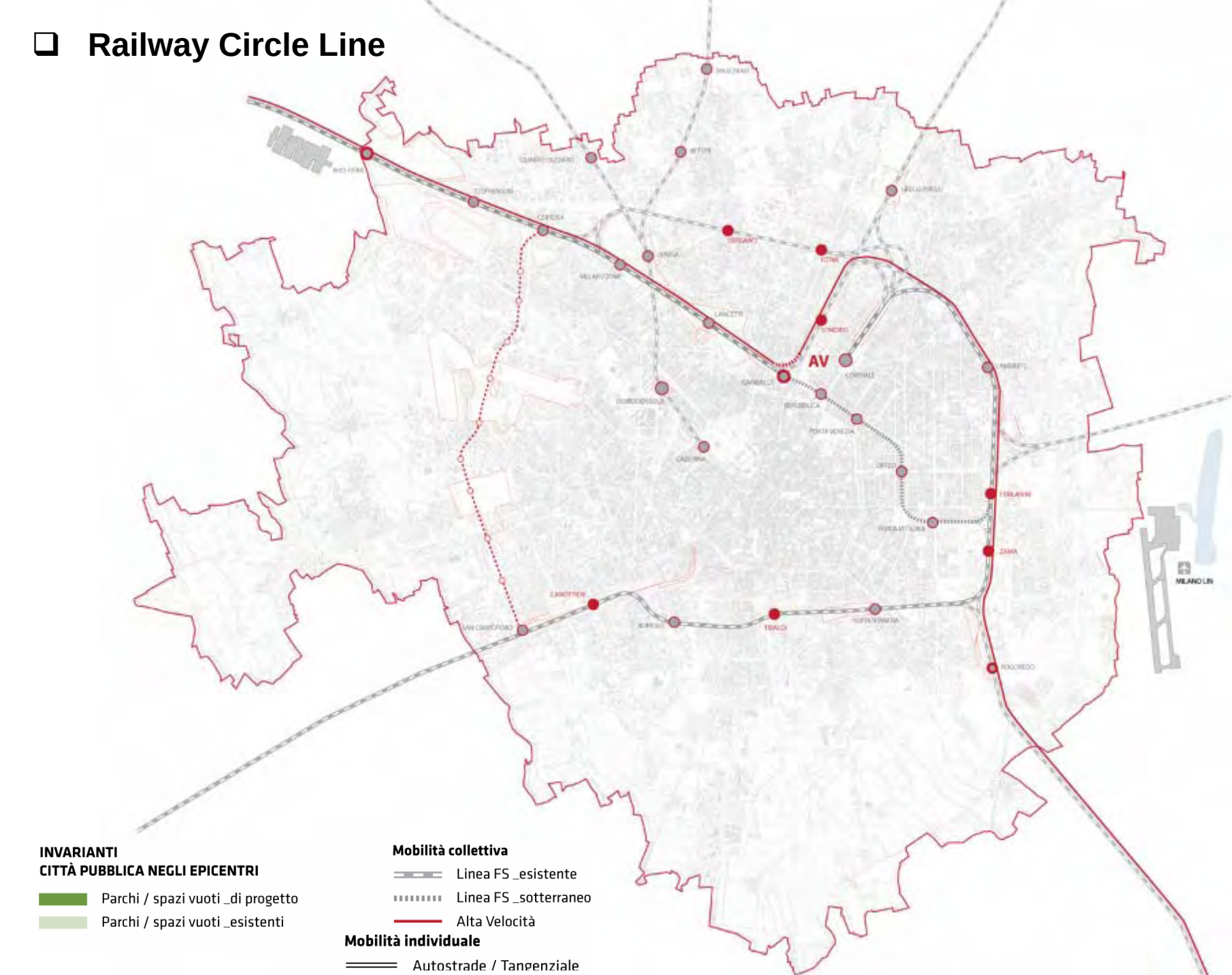



New parks
Existing parks
private mobility
Autostrade / Tangenziale
Asse stradale _di progetto
Asse stradale _di progetto (sotterraneo)
public transport
Linea FS_esistente
Linea di Forza

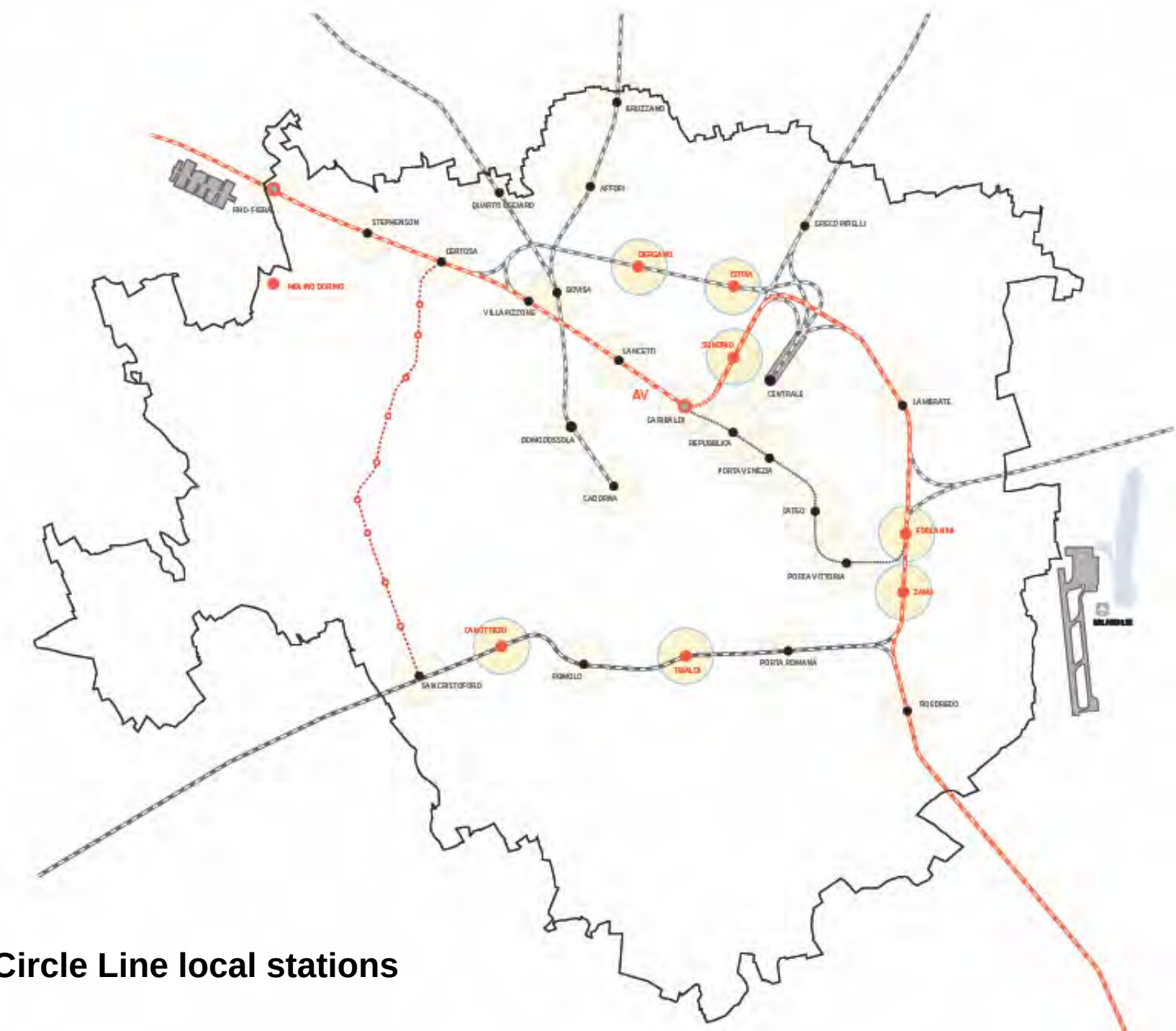

transformation areas
facilities



# ❑ Railway Circle Line



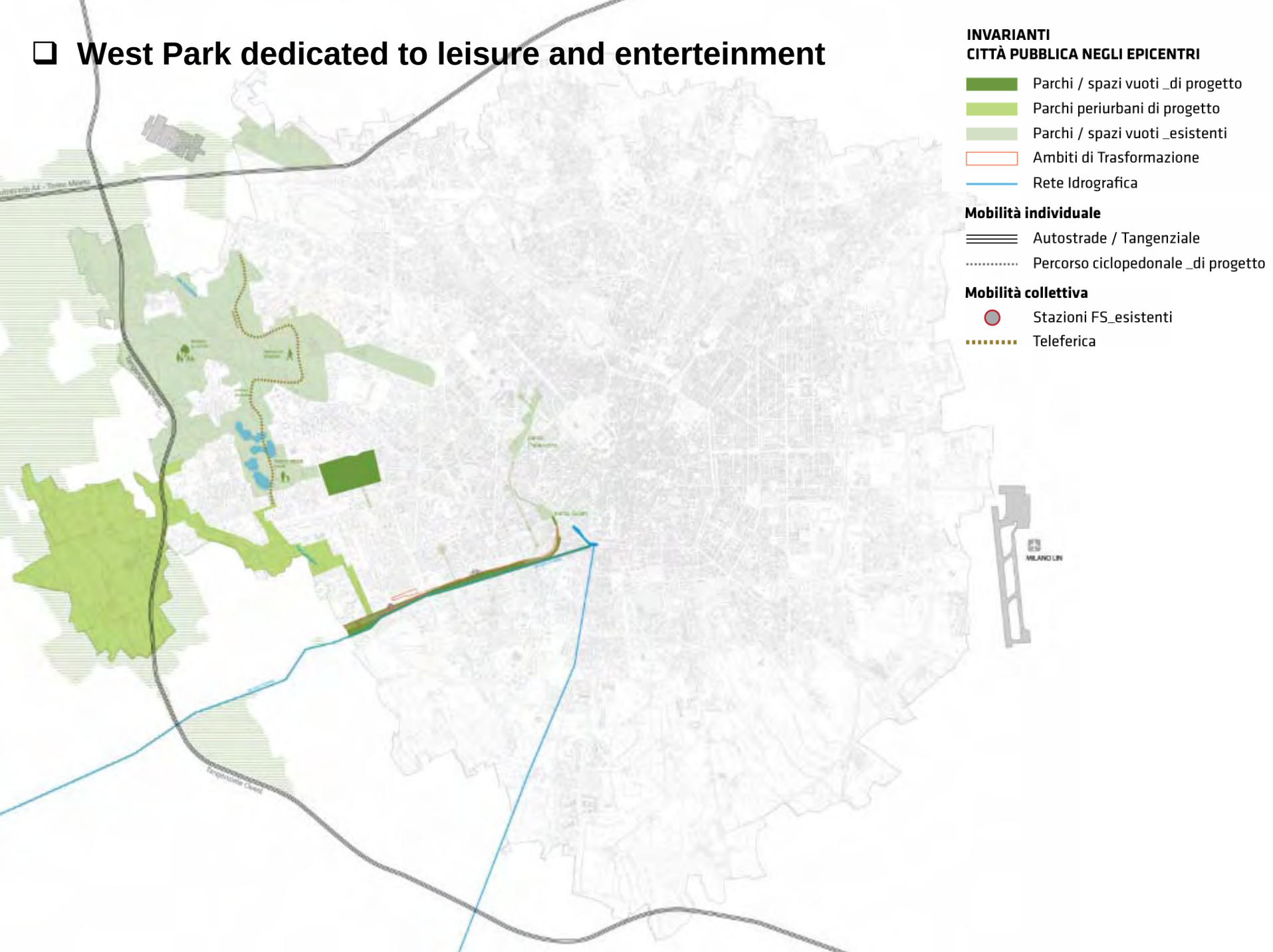
fiera rho
bovisa
cimitero maggiore
st. centrale
st. lambrate
st. garibaldi
duomo
st. p.ta vittoria
st. cadorna
st. rogoredo
s. cristoforo
st. romolo
scalo p.ta romana



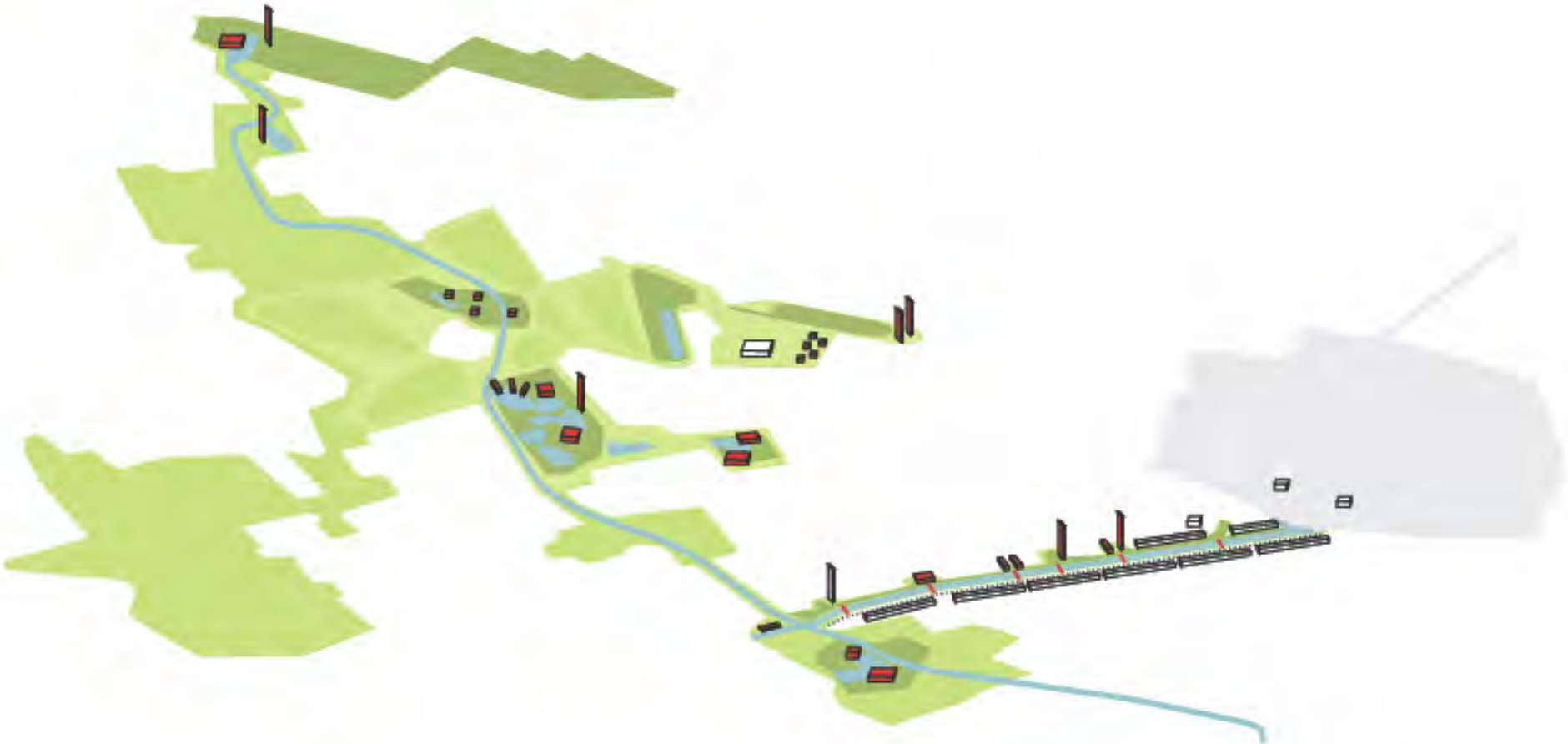

# Circle Line local stations

**Interchange stations between Circle Line, railways and subways**

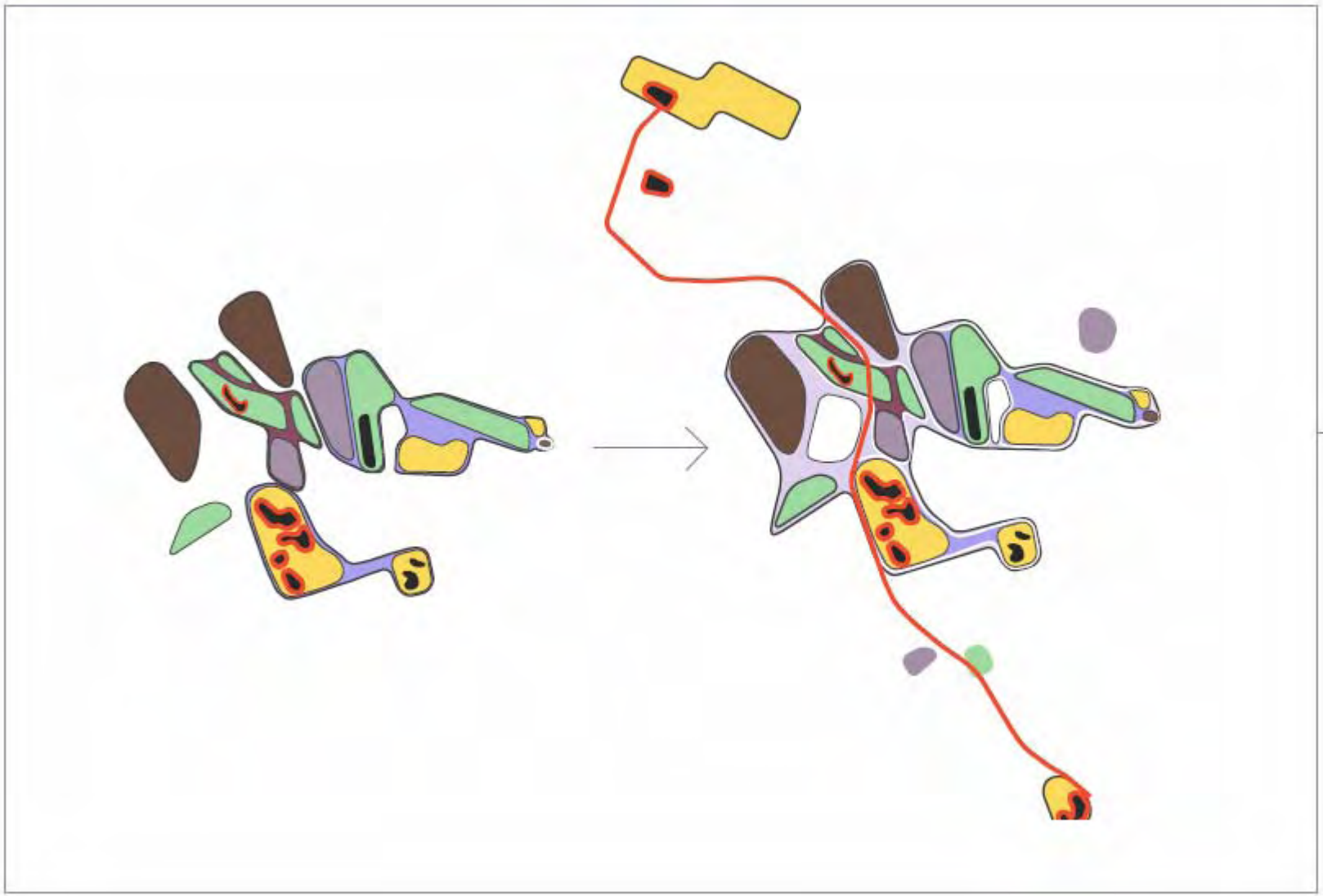
# ❑ West Park dedicated to leisure and enterteinment



fiera rho
nuovo parco crescenzago
st. centrale
parco delle cave
parco pallavicino
parco della martesana
tangenziale ovest
duomo
parco forlanini
darsena
naviglio grande
muggiano
parco s.giulia



**West Park in connection with the western environmental systems and the Navigli system**



**The  role of the system of public paths**

existing situation

project

❑ San siro project
the San Siro project as green junction
expo
San Siro
agricultural park
Simplon park
Castle

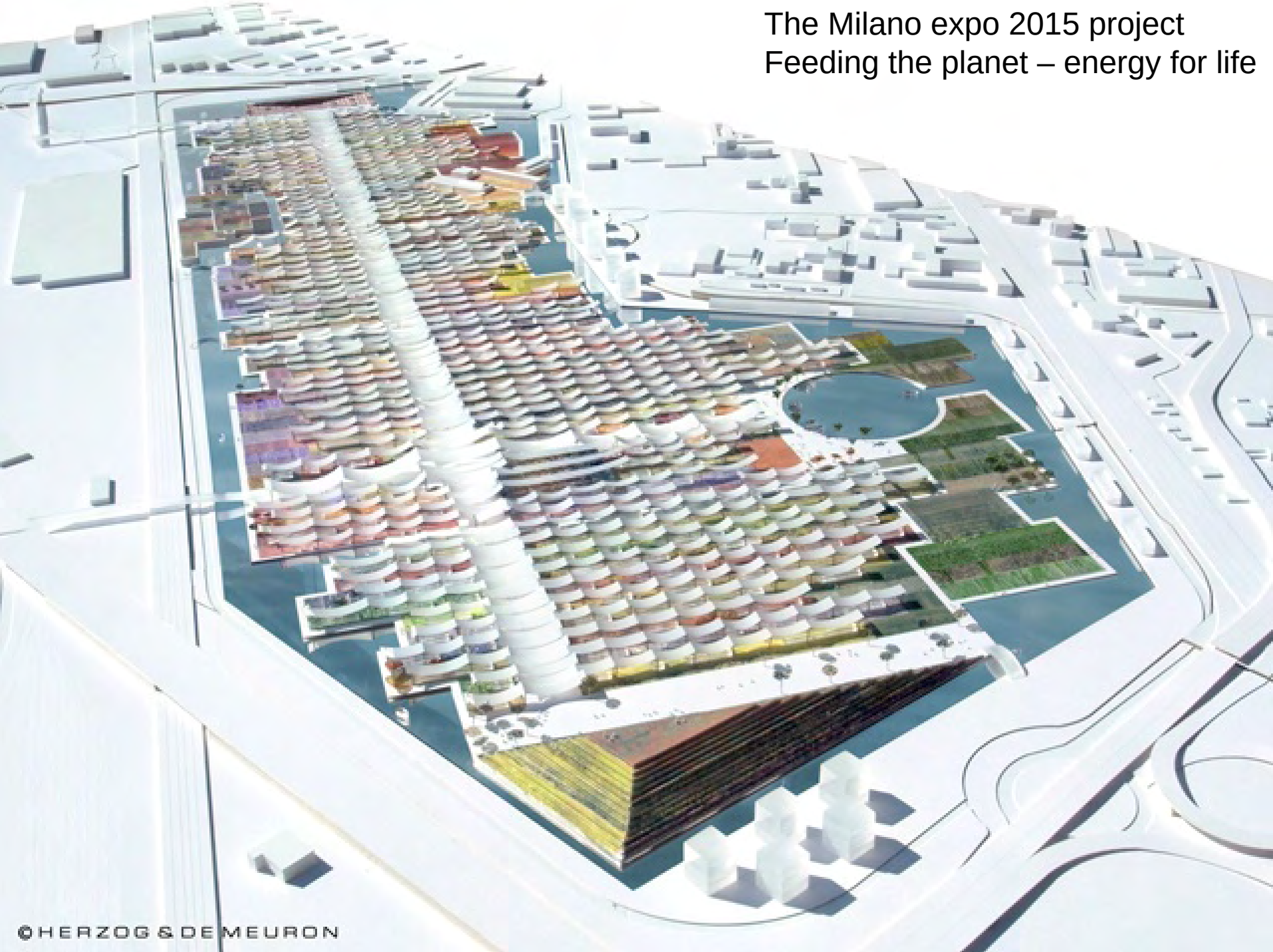
New parks and greenways
hyppodrome
Pool complex
stadium

# San siro project

# ❑ milano expo 2015

Fiera di Milano – Rho
Convention center

The Milano expo 2015 project
Feeding the planet – energy for life



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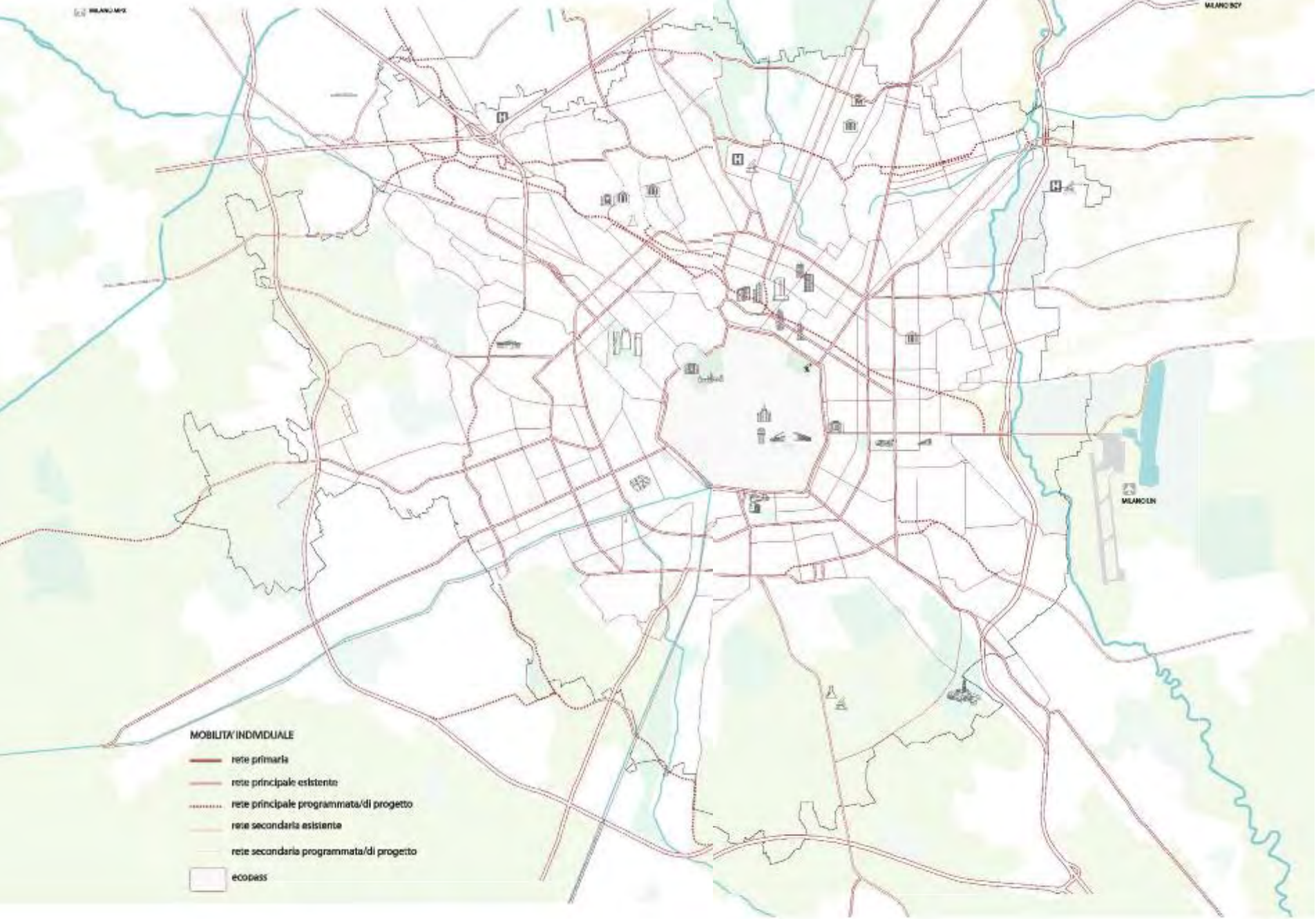
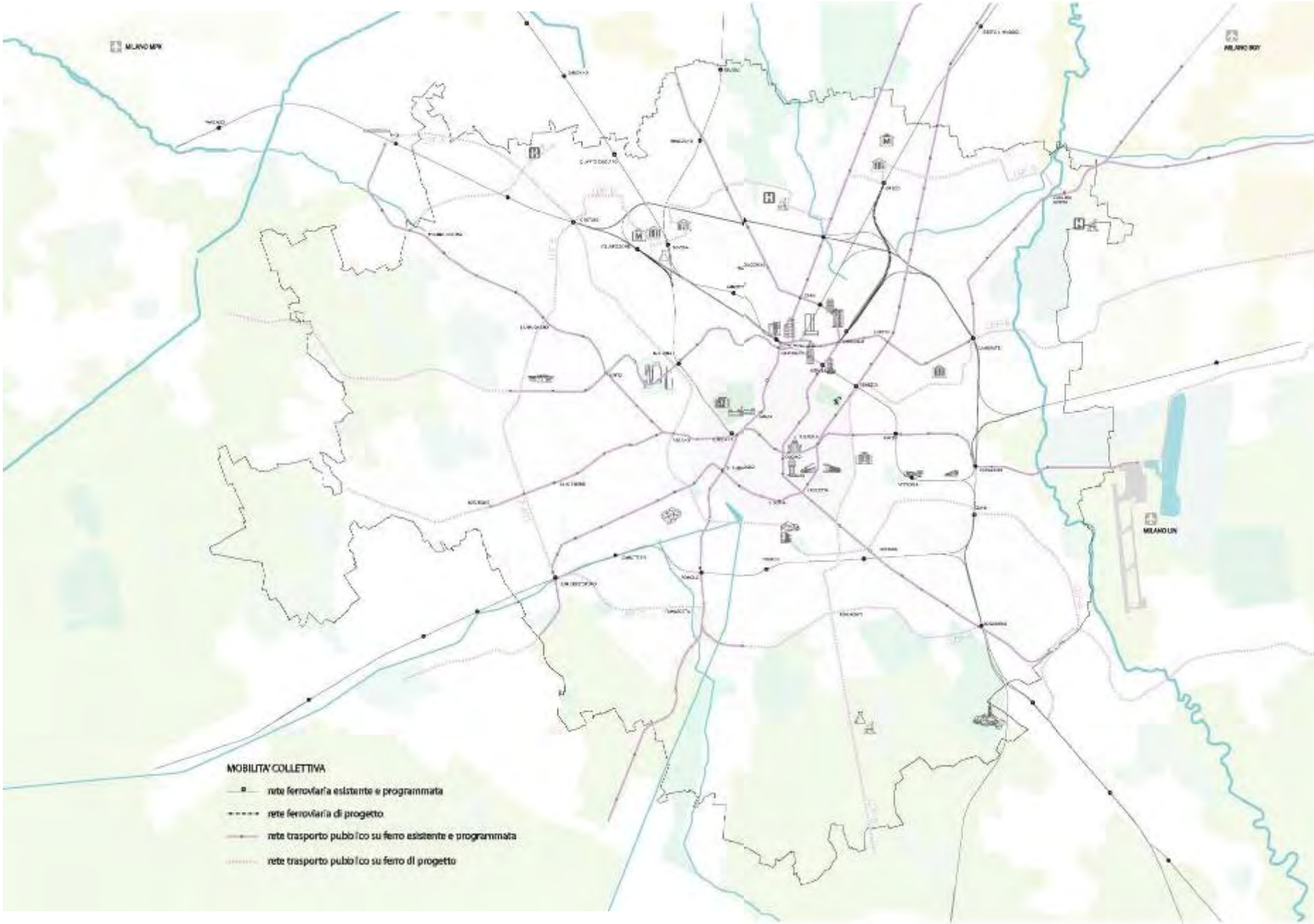
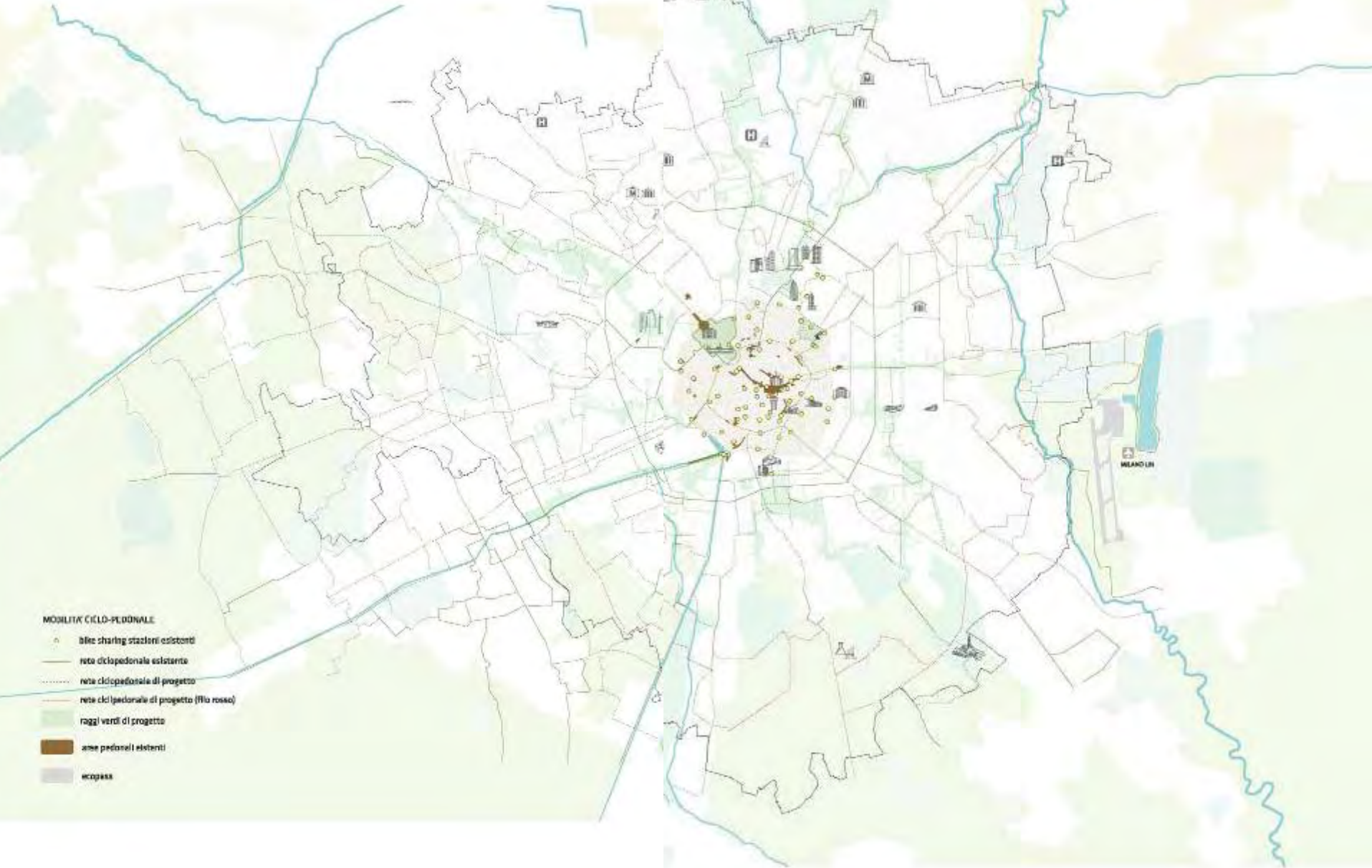

MILANO MYE
MILANO SUD
MILANO LIN
MOBILITA' INDIVIDUALE
rete primaria
rete principale esistente
rete principale programmata/di progetto
rete secondaria esistente
rete secondaria programmata/di progetto
ecopass


MILANO MPK
MILANO BGY
MILANO LIN
MOBILITA' COLLETTIVA
rete ferroviaria esistente e programmata
rete ferroviaria di progetto
rete trasporto pubblico su ferro esistente e programmata
rete trasporto pubblico su ferro di progetto

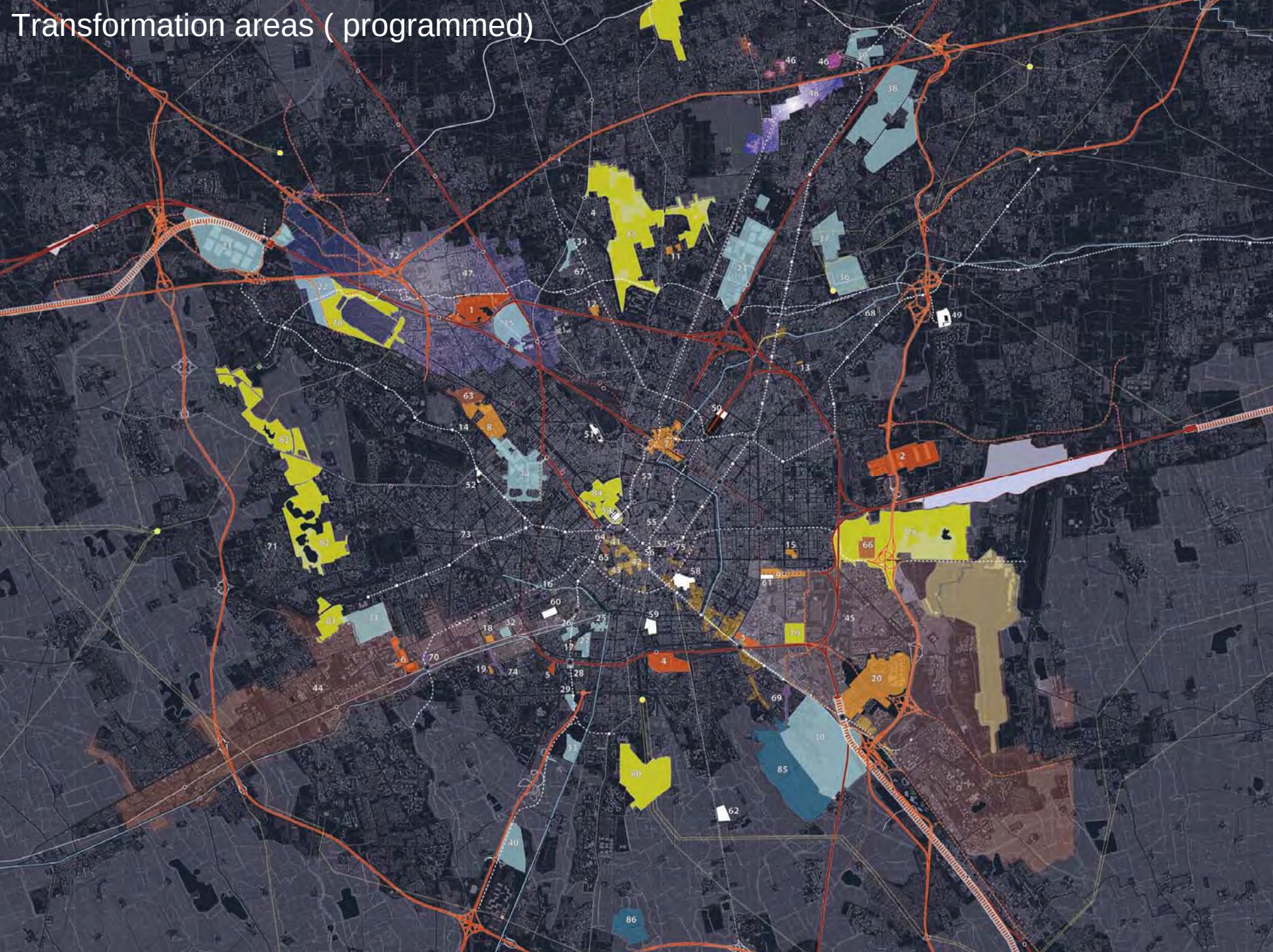

MILANO LIN
MOBILITA' CICLO-PEDONALE
bike sharing stazioni esistenti
rete ciclopedonale esistente
rete ciclopedonale di progetto
rete ciclopedonale di progetto (filo rosso)
raggi verdi di progetto
aree pedonali esistenti
ecopass

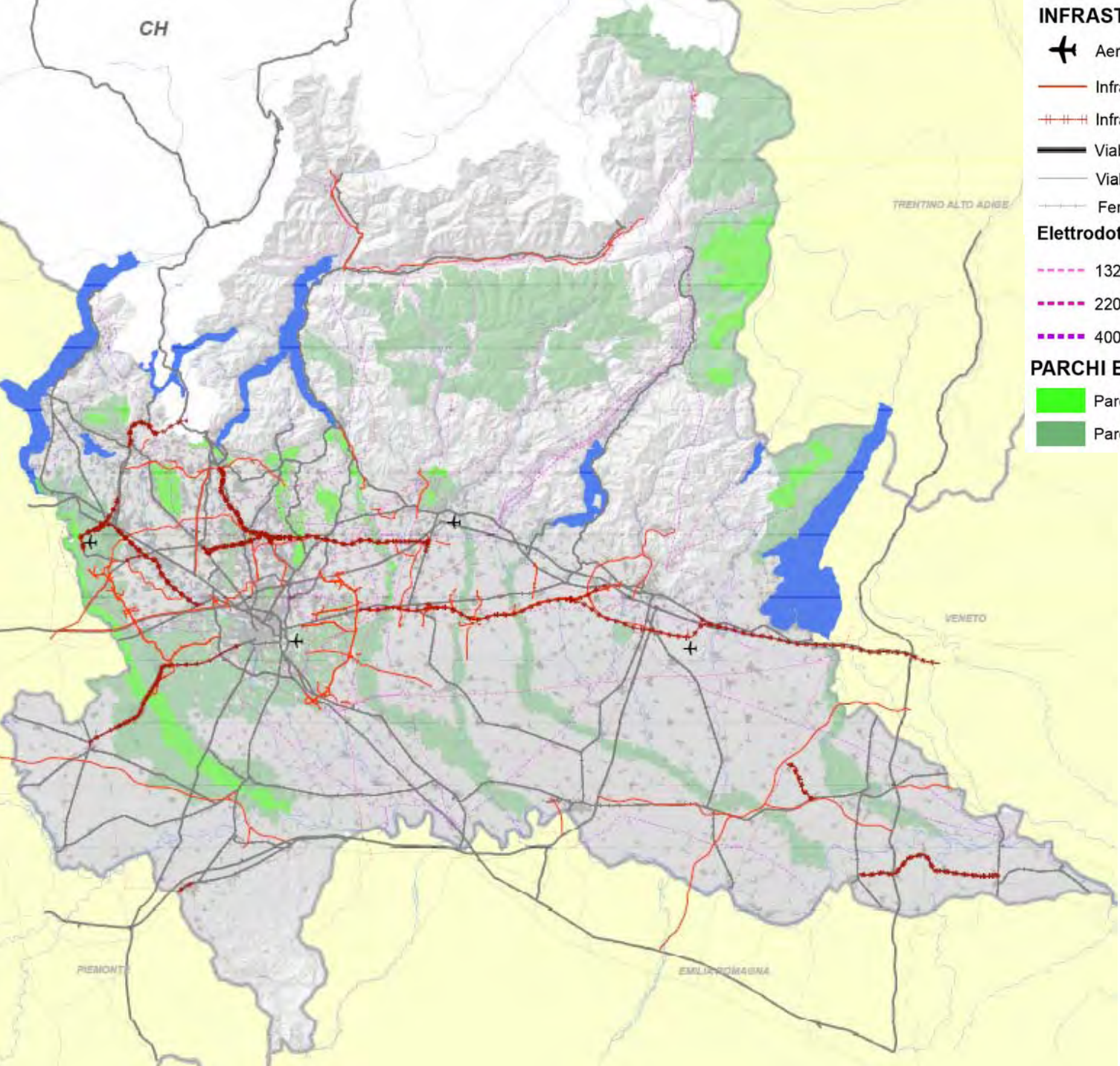
# City-Forum

## components of excellence

FUNDACIONMETROPOLI

# Transformation areas ( programmed)






**INFRASTRUTTURE PER LA MOBILITA'**

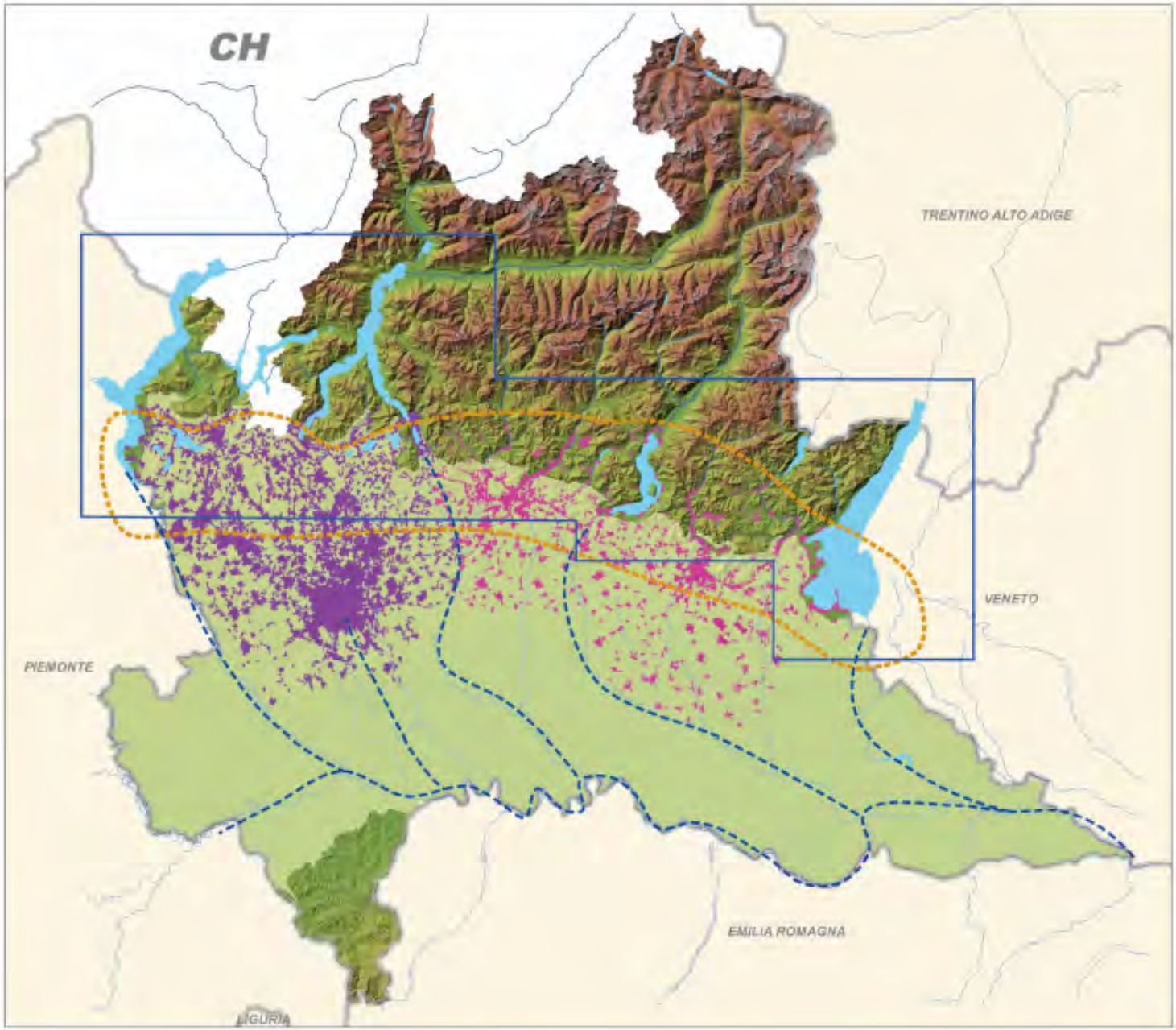
- Aeroporti principali
- Infrastrutture viarie - in progetto
- Infrastrutture ferroviarie - in progetto
- Viabilità autostradale esistente
- Viabilità stradale principale esistente
- Ferrovie esistenti

**Elettrodotti alta tensione**

- 132 KV
- 220 KV
- 400 KV

**PARCHI E RISERVE**

- Parchi naturali
- Parchi regionali e nazionali




PIANO TERRITORIALE REGIONALE

I SISTEMI TERRITORIALI DEL PTR

Scala 1:500.000

tavola 4

# 5

# territorial features