



CITIES  
NETWORK



Comune di  
Milano

# A green and resilient Milan

DP Città Resilienti | Direzione Transizione Ambientale | Comune di Milano

# The Environmental Transition Department

## UNITS INVOLVED



**City Resilience Department**



**Climate and Energy Area**



**Water Resources and Environmental Hygiene Area**

## RESPONSIBLE FOR:

- The implementation of environmental and energy policies;
- Resilience issues;
- Functions in the field of environmental protection and the fight against pollution





# Plans and projects for a greener Milan

# PGT MILANO 2030

## City Masterplan Milano 2030

### A Green, Livable, Resilient City

Milan 2030 wants to give itself a green footprint. To this end, the PGT has downsized land use forecasts for building, thus reducing land consumption.

Water is once again the protagonist, thanks to the reopening of the Navigli (canals) and the plans for Lambro and Seveso rivers.

The green belt which will connect twenty new city parks eventually becoming the urban threshold of the Metropolitan Park.

New environmental standards favor the reduction of greenhouse gas and carbon emissions and help mitigate climate events



**STRATEGIES 5 and 6**





# strategy 5 \_ MAKE WAY FOR THE ENVIRONMENT

## Green and Blue infrastructure

### Azioni capillari





-  Ambiti di rigenerazione ambientale
-  Ambiti prioritari drenaggio urbano sostenibile (tramite NBS)

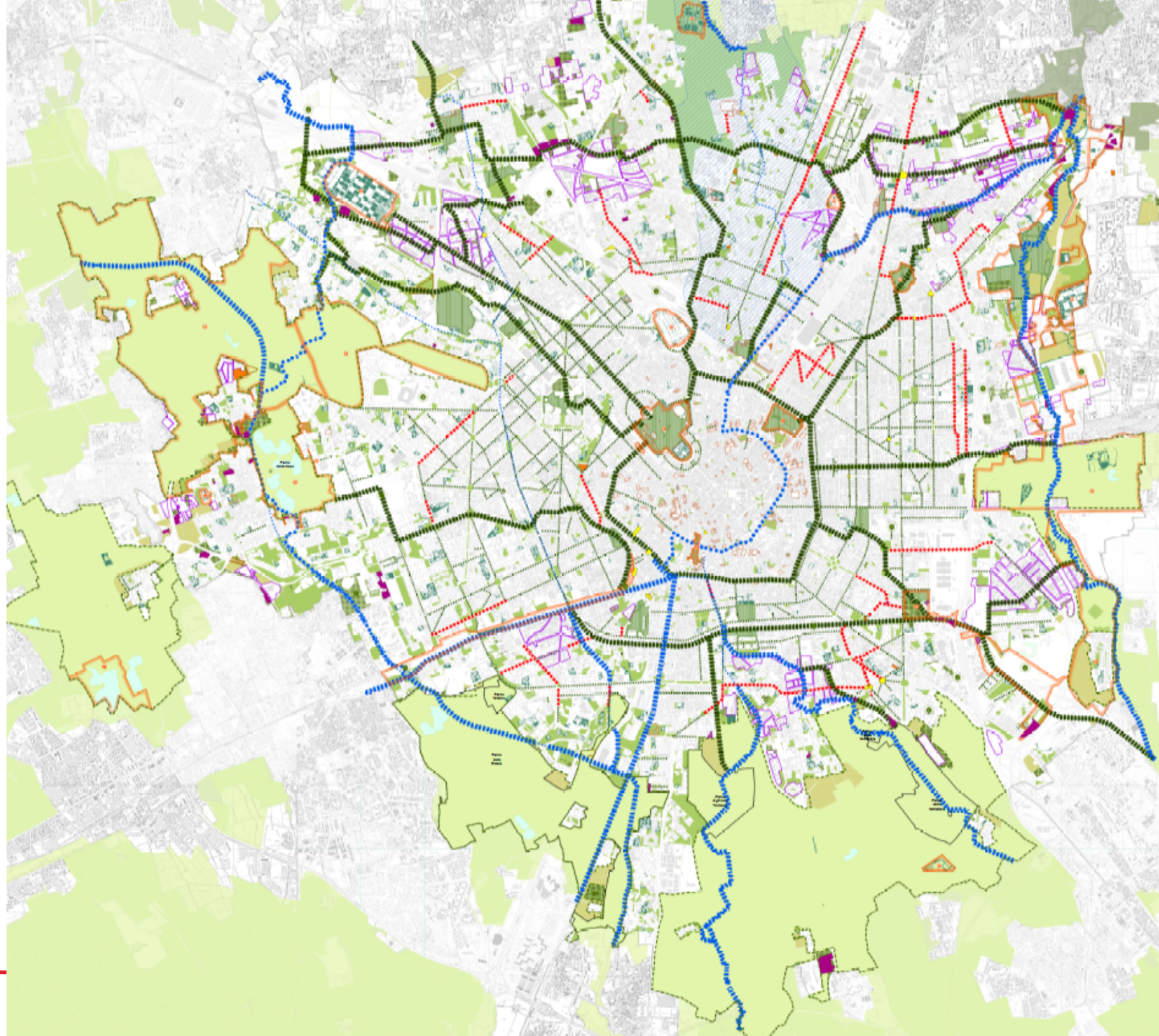
### Aree per forestazione/piantumazione

-  Aree pubbliche da forestare/piantumare
-  Spazi per la sosta da depavimentare e piantumare

### Aree da depavimentare in parte e piantumare

-  Spazi per la sosta
-  Piazze

-  Connessioni verdi lineari esistenti
-  Connessioni verdi lineari da realizzare
-  Infrastrutture blu
-  Infrastrutture blu - corsi d'acqua tombinati da valorizzare



# Art. 10 of PGT

## New quality standards for all buildings

Minimizing energy consumption, **re-naturalizing and maximizing the city's permeable surface**, reducing the carbon footprint of both new buildings and in the regeneration of the building stock.

### Shocks & stresses

- Floods – flooding
- Air and water pollution
- Heat waves and extreme heat

### Stakeholders

Direzione Generale, Urbanistica, AMAT

### Status

Approved



# Emissions reduction and climate impact reduction index (CCPI)

## ➤ 1. Reduction of CO2 emissions

Reduction of emissions for the requalification of the existing buildings;  
Carbon neutrality for new buildings

Design elements that can be used in an alternative or composite way

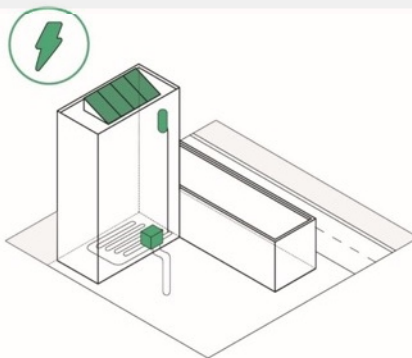
- Solutions with high energetic performance;
- Re-naturalizing interventions, also through green integrated in buildings;
- Technologies for a reduced hydric consumption and for a reuse of rainwater;
- Use of sustainable materials and/or with recycled content;
- Adoption of surface finishes with a high coefficient of solar reflectance;
- Solutions for sustainable mobility.

## ➤ 2. Achievement of a climate impact reduction index -RIC

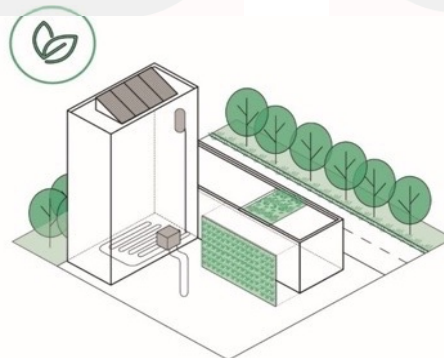
as the relationship between green areas and the territorial surface of the intervention

Design elements that can be used in an alternative or composite way

- Permeable surfaces on the ground;
- Greened permeable surfaces on the ground;
- Paved permeable surfaces on the ground;
- Green roofs architecturally integrated and equipped with a drainage layer;
- Green covers for buried artifacts equipped with a drainage layer;
- Green walls architecturally integrated in buildings.



ENERGY EFFICIENCY / RENEWABLE ENERGIES



RENATURALISATION



CARBON FOOTPRINT REDUCTION

# Air and climate plan

1

**ADAPTING to**  
Climate Change

Flooding  
Extreme Heat

2

Climate Change  
**MITIGATION**

Decarbonization  
CO2 Storage

3

**AIR QUALITY**

Reduction of  
concentration of Nox,  
PMx and Ozone



# Air and climate plan

Focus 1 : Healthy and Inclusive Milan

Focus 2 : Connected and highly accessible Milan

Focus 3 : Positive Energy Milan

Focus 4 : Cool Milan



Focus 5 : Aware Citizens

4.2

Urban cooling and  
reduction of the heat  
island effect in the city

4.3

Milan  
Sponge-City

# ForestaMI

## Forestry Program

Planting of **3 million trees by 2030** in the metropolitan area.

**+5%** increase in tree canopy cover

Absorption of **5 million tons of CO2** per year

### Shocks & stress targeted

- Air and water pollution
- Heat waves and extreme heat
- Degradation of urban spaces

### Memorandum of Understanding between:

Comune di Milano, Città Metropolitana di Milano, Parco Nord, Parco Agricolo Sud, con il coordinamento scientifico del Politecnico di Milano

### Status

Ongoing (2018-2030)



July 2021  
> 300.000 trees planted

# LIFE VEG-GAP

## Vegetation for Urban Green Air Quality Plans

- Evaluation of **direct and indirect effects of vegetation on air quality, temperatures** and human **health**
- Identification of the **most suitable tree species** for the city of Milan according to the meteorological, climatic and air quality components.
- Cities: **Milan, Bologna** and **Madrid**

### Stakeholder

Comune di Milano, ENEA, ARIANET, CREA, Ayuntamiento de Madrid, Città metropolitana di Bologna, MEEO S.r.l., Universidad Politécnica de Madrid

### Status

on-going (2018-2021)



La vegetazione per un'aria più pulita e un clima migliore: un'integrazione olistica verso le città del futuro.

# Depaving Program

- **DEFINE A GOAL FOR THE DEPAVING PROGRAM** of the city of Milan
- **TO EXPERIMENT INNOVATIVE PROJECTS** of high environmental value, as pilot cases for the city.

## Shocks & stress targeted

- Degradation of urban spaces
- floods and inundations
- heat waves
- air and water pollution

## Stakeholder

Direzione Generale, Dir. Transizione Ambientale, Dir. Urbanistica, Dir. Quartieri e Municipi, Dir. Mobilità e Trasporti, AMAT

## Status

Ongoing



# Depaving Program

## Possible depaving areas

Tav. S03 PGT  
ca. 174.000 mq

+



mapping\*  
ca. 278.000 mq

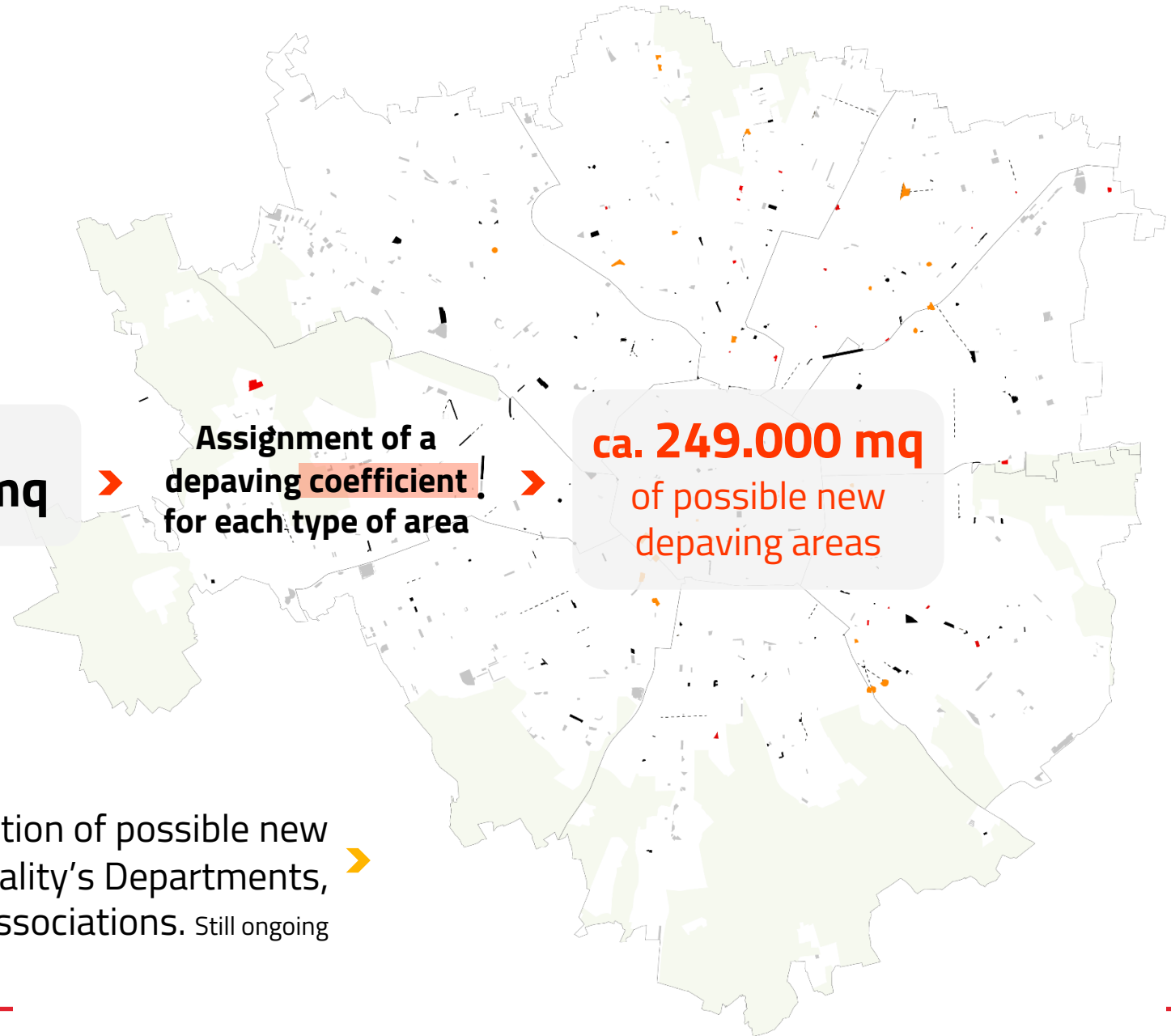
Total  
ca. 452.000 mq



Assignment of a  
depaving coefficient  
for each type of area



ca. 249.000 mq  
of possible new  
depaving areas



Mapping resulting from the identification of possible new depaving areas, identified with the Municipality's Departments, citizens, municipalities and associations. Still ongoing

# "Piazze Aperte" project

A project to use the tactical urbanism approach to bring public space back to the center of the neighborhood and the life of the inhabitants

**Piazze Aperte** is a project of the City of Milan, realized in collaboration with Bloomberg Associates, National Association of City Transportation Official (NACTO) and Global Designing Cities Initiatives.



The number achieved from 2018:

**27** new social spaces

**20.000 m2** new pedestrian area

**220** benches

**250** potted plants

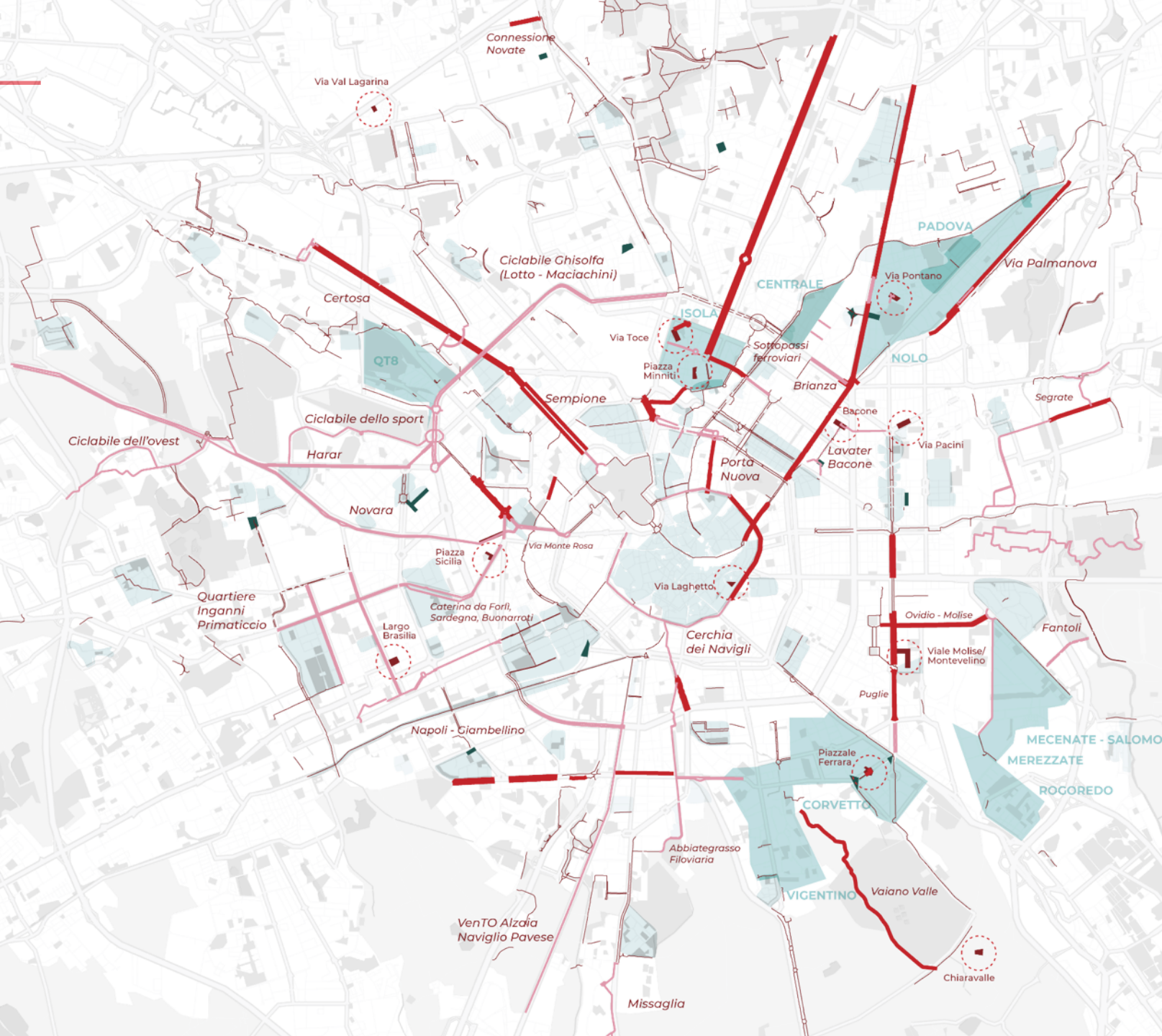
**350** bicycle stations

**50** tables (25 ping pong)







# Strade Aperte project




2020 – 2021



## Programmazione

-  Itinerari ciclabili realizzati
-  Itinerari ciclabili programmati
-  Nuove Zone 30
-  Piazze Aperte 2020

## Stato di fatto

-  Itinerari ciclabili esistenti
-  Zone 30 esistenti
-  Piazze Aperte realizzate

# Strade Aperte

## Strategy Goals:

- 35 new kilometres of cycle paths by the end of the year
- extension of "zones 30»
- widening of sidewalks
- temporary pedestrianisation in neighbourhoods



The number achieved from May 2020 and future goals:

**32,3 Km** implemented by 30/09/2020

**61,7 Km** implemented by 31/12/2021

**111 km** planned for 30/04/2021





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Thank you

