



**cittàsane**

La rete italiana dei Comuni  
riconosciuta dall'Organizzazione Mondiale della Sanità  
[www.retecittasane.it](http://www.retecittasane.it)

***Italian Healthy Cities Network – WORLD HEALTH ORGANIZATION***

***Simona Arletti – President***

# **Cycling as sustainable and healthy urban mobility experience**

**Barcelona 14<sup>th</sup> June 2016**



# How can we say that a city is “healthy”?



**An healthy city is not the one who has reached a particular level of health, but one that chooses to improve with energy!**

- **promoting and carrying out actions on the territory and initiatives to achieve the objectives of protecting public health and environmental conditions in order to foster health;**
- **preparing health profiles and socio-health plans that integrate projects and programmatic choices of the City with those of the health authorities and other local actors;**
- **supporting and enhancing the experiences and the planning of all the resources in the area and in particular public and private entities identified as significant for the realization of inter- sectorial and community projects.**



## **WE HELP THE CITY 'WHO WANT TO BECOME HEALTHY!**

**The Healthy Cities project is promoted by the World Health Organization (WHO), the United Nations specialized agency for health, which operates since 1948 with the aim of ensuring to the world's population the highest level of health.**

**Healthy Cities is a movement of cities on all continents. In Europe it is present in 1,400 cities and in 30 countries which have a national network that today work side by side on the priority chosen by WHO.**

**In Italy, the project started on 1995 as a movement of Municipalities, and on 2001 became a non-profit association, then a legally recognized Association on 2012: today the city members of the Network are 75.**



## Steering Committee of Italian Healthy Cities Network WHO October 30, 2013

*Head/Presidency/Coordination*  
Modena Municipality

### *Steering Committee*

Municipalities of: Ancona, Arezzo, Firenze, Foggia, Genova, Molfetta, Palermo, Pavia, Sacile, Udine, Venezia, Padova, Milano, Torino, Bologna.



## The map of the Network (early 2016)



## Phase VI (2014 - 2018)

### Innovation, leadership and shared governance for health and well-being

- **Theme 1: the life course and empowering people**
- **Theme 2: tackling the major public health challenges**
- **Theme 3: strengthening people-centred health systems and public health capacity**
- **Theme 4: creating resilient communities and supportive environments**

The WHO European Healthy Cities Network is now positioned as a strategic vehicle at the local level for implementing **Health 2020**, the new European policy and strategy for health and well-being.



## Being part of the Healthy Cities network for a Municipality means:

1. enriching of experience and ideas both technical officers and politicians, focal point in their cities for the management of public health;
2. improving the health status of their city, acquiring and sharing tools, ideas and projects that act as incentives for daily activity;
3. counting on the help of Italian and European networks connected with WHO, involved in promoting health and in continuous dialogue to identify the best solutions;
4. making commitments, locally, towards its citizens;
5. building community projects with all the realities of the territory.





## The lines of work of the Italian Network are:

- sustainable mobility
- healthy diet
- physical activity
- healthy lifestyles
- relationship between environment and health / city planning
- healthy aging



**cittasane**  
rete italiana OMS



# Environment and health issues are most often mediated locally



World Health  
Organization

REGIONAL OFFICE FOR

Europe

Meeting of the WHO European Healthy Cities Network and National Network Coordinators

4th April 2016, WHO Regional Office for Europe, Copenhagen, Denmark



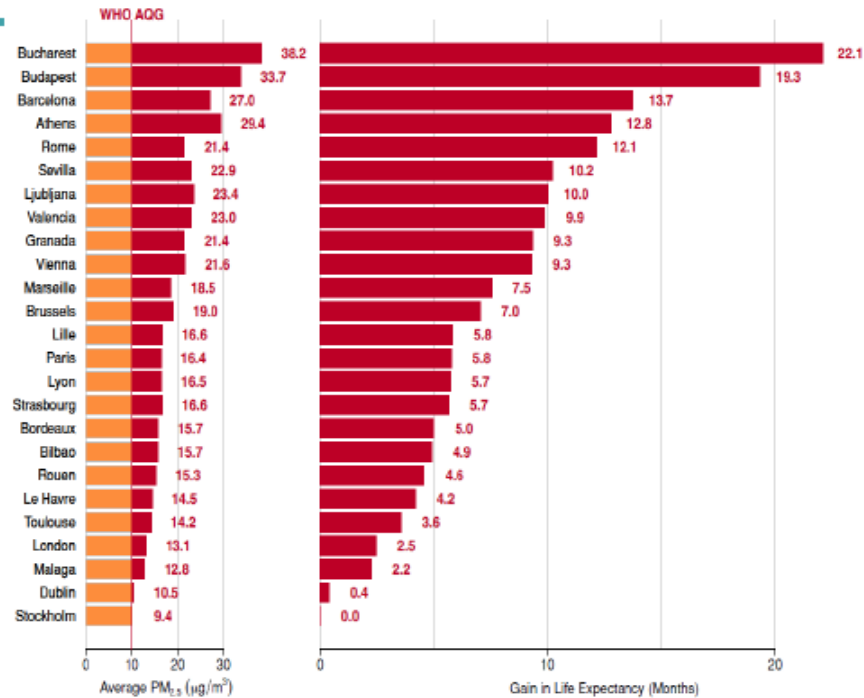
# What are the pressing EH issues in cities?

- **Air quality**
- **Water and sanitation**
- **Noise**
- **Housing**
- **Transport – active mobility**
- **Land use, zoning and green spaces**
- **Climate change mitigation and adaptation**



# Reducing air pollution in the cities is bringing gain in life expectancy

Gain in life expectancy (months) for people aged 30 years for a reduction in average annual levels of PM2.5 down to the WHO AQG annual mean level of 10µg/m<sup>3</sup> in 25 European cities



## Some of the activities of Italian Network.....

**WHO World days organization:** common initiatives realized in all the cities belonging to the National Network.

**The annual National Meeting** which is realized every year in a different city of the Network and on a different issue: the last one has been realized in Milan and has dealt with “Communication and participation for health”.

**Health Oscar / Healthy Cities Award** which every year gives a prize (both economic and symbolic) to the cities that have presented the most deserving projects or best practices concerning health issues.

**The web site [www.retecittasane.it](http://www.retecittasane.it):** a space of public virtual discussion dedicated to urban health and public health policies, which offers up to date information, documents for widening and communication.

**The educative and formative workshops** dedicated to administrators and technicians in different part of the countries and on different themes; we have realized a survey among the cities to detect the most interested themes.

**Community projects** realized at local level in different cities; for exemple: “The paths of heart and memory”; “The children’s healthy cities”; “Globulandia - the adventure in red” to promote the connection between blood donation and healthy lifestyles; and so on.



## What is a community project?

**Intervention of health promotion, directed to a sufficiently uniform community, in which all members participate actively involved, each for its own part, the design, to the implementation and the verification of results**



# Community project: key rules

**Empower and invest with responsibility**

**Stimulate the protagonism**

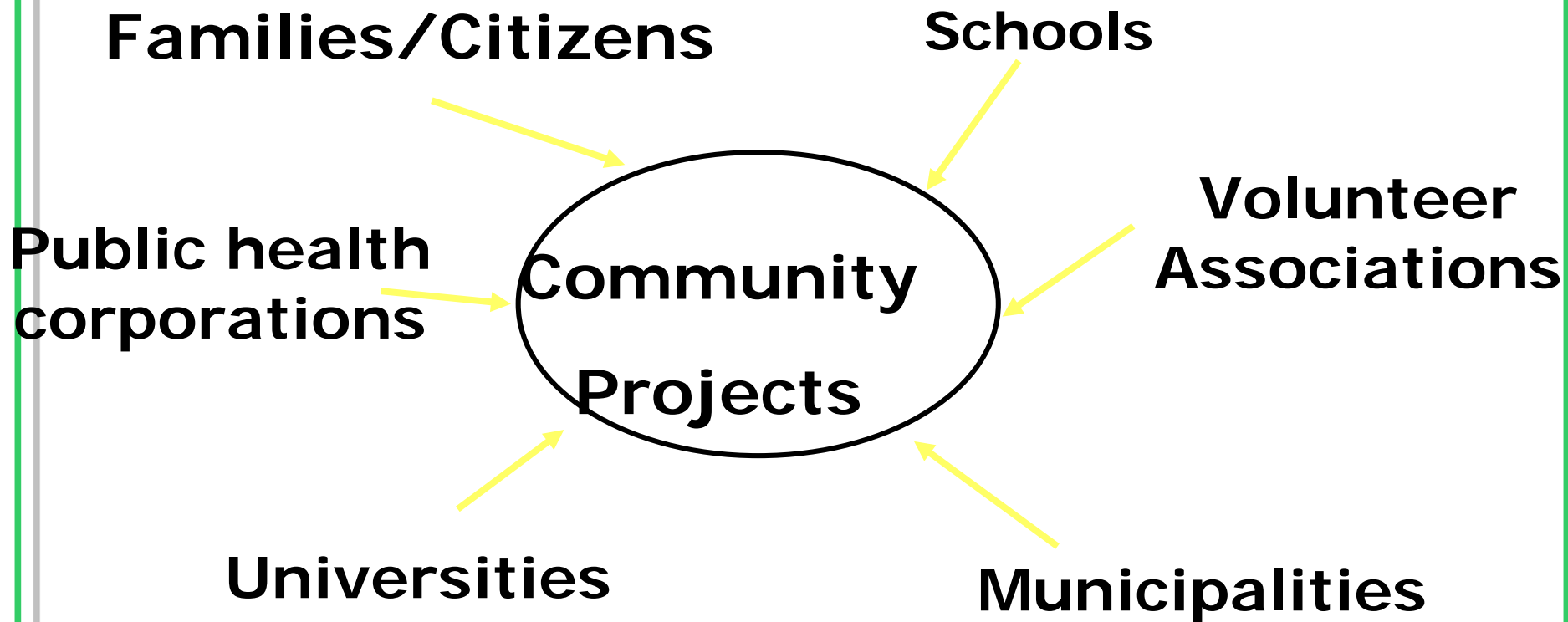
**Be flexible**

**Do not prevaricate**

**Have patience**



# Community project: stakeholders





## The Network's projects - examples

### Healthy cities for healthy aging:

the paths of the heart and memory

### Healthy cities to grow well:

children's healthy cities

### Healthy cities to remain active:

dissemination of the Toronto Charter

### Healthy cities for himself and for others:

Globulandia - an adventure in red, A choice Shared

### Healthy cities to save money in health:

HEAT (health economic assessment tool)

### Healthy cities to promote resilient cities:

the Charter of Molfetta

### Healthy cities to redevelop urban voids:

the Charter of Genova

### Healthy cities to promote breast feeding:

Decalogue of Venice and "allattamentro"



I Percorsi  
ria



Le Città Sane  
dei bambini



# PHAN

## Physical Activity Networking

Practical application of Health Economic Assessment Tool (HEAT) in Modena



Modena Municipality

## City of Modena – Italy

185.000 inhabitants

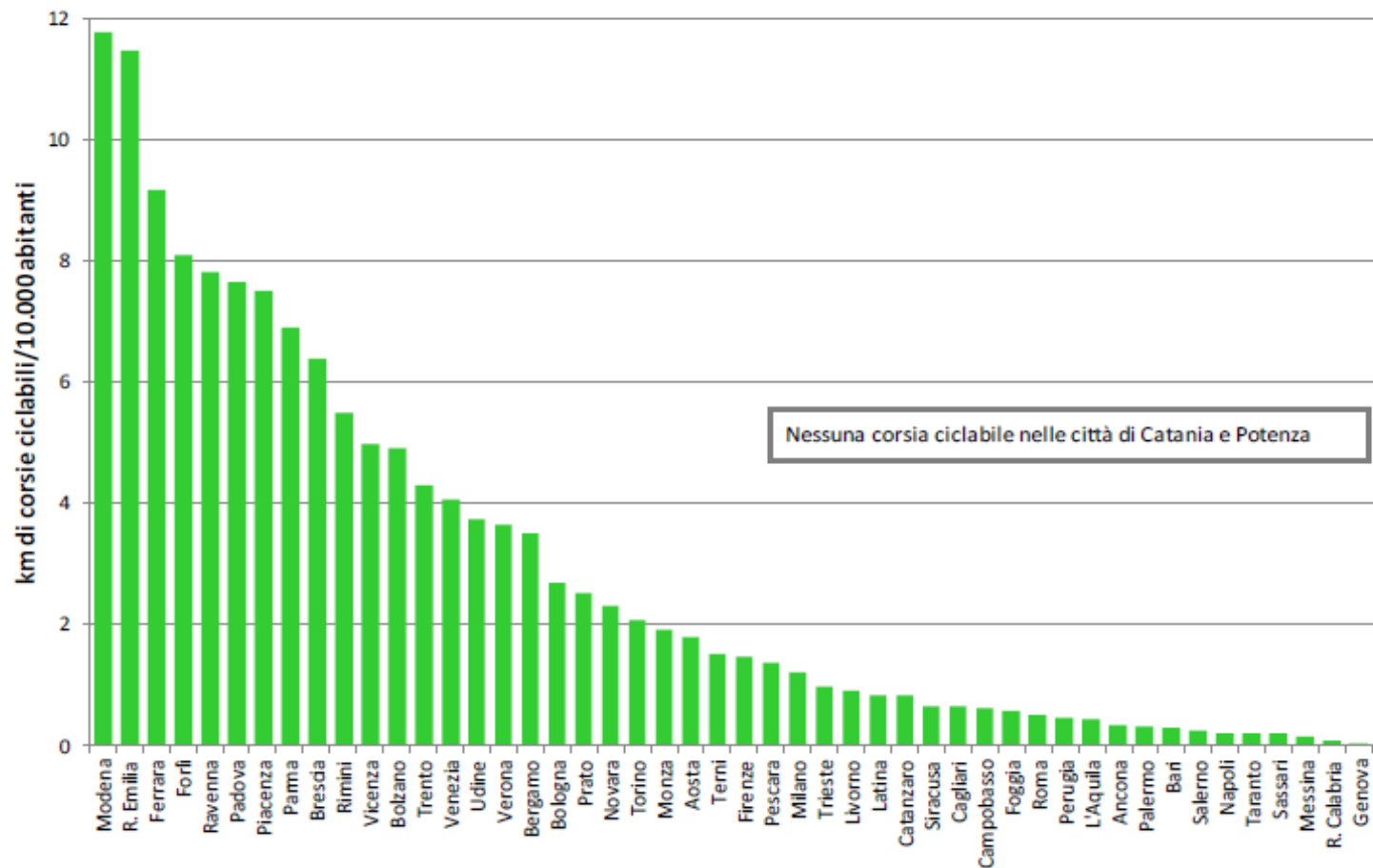
183,19 km<sup>2</sup>

215 km of cycle lanes



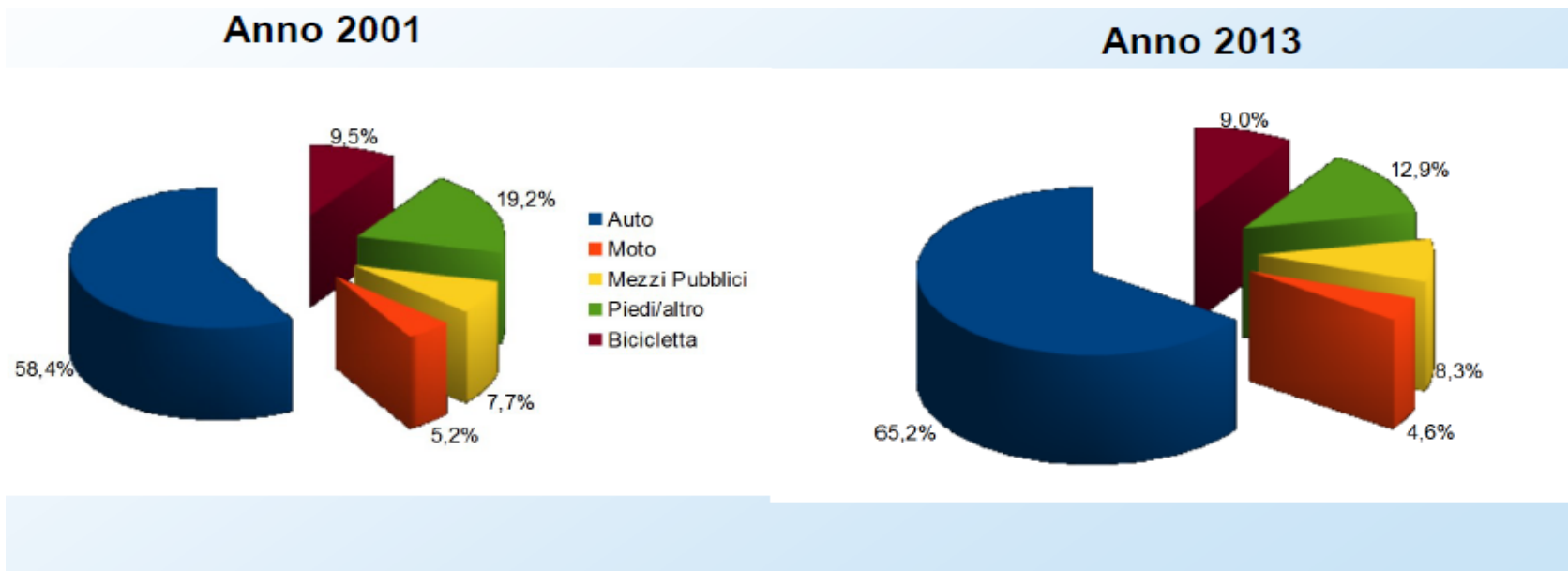
Modena Municipality

# Corsie ciclabili (km/10.000 abitanti)



Modena Municipality

**In Emilia Romagna Region there is an overall growth in the choice of cars and a decrease in the choice of cycling and walking**



Modena Municipality

## Applying HEAT in Modena

The City of Modena tested **HEAT FOR CYCLING** on a new stretch of cycle lane: a path that links City centre to the most important Hospital of the City , University and Health public department, along Moreali Street.

The aims are:

- to convey the message that building Moreali's path is not only an infrastructural investment but also a mark of engagement of the public administration to promote citizens' health.
- to support public policy with concrete indicators that demonstrate clearly how this infrastructure brings a long period gain in terms of health.



Modena Municipality

## Applying HEAT in Modena

A **working group** was created and it included two regional health service officers, a technical ARPA (environment prevention regional agency) officer, a statistician officer of Modena Municipality, two members of UDACE Modena and FIAB - associations of cycling user groups - , an officer of road and traffic local authority, the mobility manager of main Hospital in Modena, town councilor for Health and Environment, the national coordinator of health city Italian network, the Head officer of Agenda 21, Healthy City officers.

The **project is to build a cycling path, 250 mt. long, in Moreali street**, that could link the University Hospital/public health services and the university student residence. Implementing this cycling path means giving at citizens a better solution to reach their job, their homes and the public health services instead of using their own car. The intervention takes place within 2012 and the total cost for the project is 40.000€.



Modena Municipality

## First step: collecting data/1



Data collection was about the cycling flow on the area's project and the impact of infrastructure on road network.

**The cycling flow was measured by members of FIAB and UDACE Modena groups**, associations of cycling users that takes part of PHAN working group.

The operators chose **two days when meteo condition was good for cycling from 7.30 a.m. to 9.30 a.m. and from 5.30 p.m. to 7.30 p.m.** These time periods represent two moments during the day when people move from home to job and from job to home. Moreover the students go to school or come back but also a lot of people make use of public health services.



Modena Municipality



## First step: collecting data/2



Every half an hour the operators had detected numbers of cyclists on two main crossroads where a lot of people go cycling to University Hospital, to School, to public health services, or on the contrary go to the City centre.

One of the data input required by HEAT tool is the mortality rate of the population being studied so, we have had help from our colleagues of the University Hospital (Policlinico) that takes part in PHAN working group.

Another data the average distance cycled per person per year than in Modena is estimated to be 225 km (it comes from an electronic bike counter placed in the city).



Second step was the application of the Tool.

## Second step: Using Heat Tool/1



HEAT required the number of trips observed per day.  
We worked out a mathematic average of measurements done in  
November 2011 in Moreali street (344 observed trips).

In the second part of assessment, we estimated the number of trips  
working out a mathematic average of measurements done last  
November on the main road that link centre city to Hospital and  
University area: Emilia street (1091 observed trips).

Later we added the two averages: the result is 1435 trips / cyclists

Assuming that citizen of Modena cycle a lot during the year, an average  
of 300 days a year of cycling was put in to the Heat Tool



Modena Municipality

**Second step was the application of the Tool.**  
**Second step: Using Heat Tool/2**



Average trip length before the new path: **750** mt

New stretch of cycling path connecting two previously existing path: 250 mt

Average trip length after the new path: **1600** mt

About the proportion of cycling data referring only to the new path we chose to enter 80 percent because we estimated 20 percent the other reason that could influence the increase in cycling and 80 percent the impact of our project on cycling towards the Hospital and University area.

The total cost for the realization of the new stretch of cycling path is:  
40.000 €

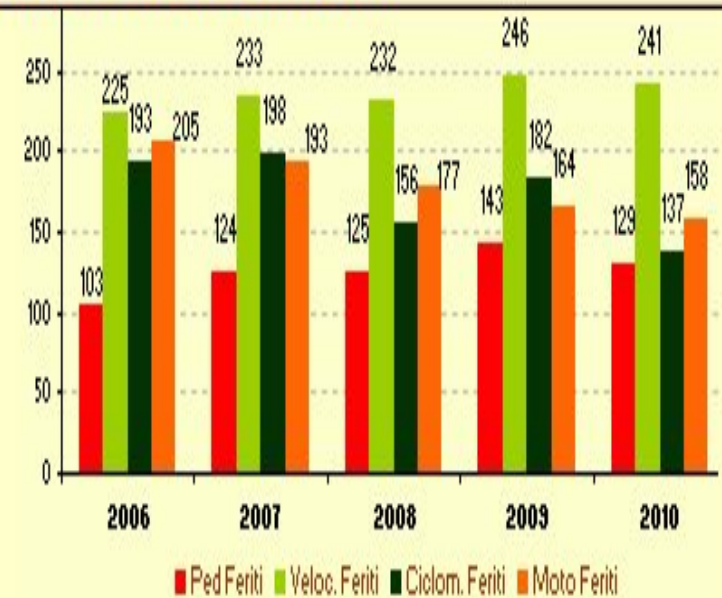


Modena Municipality

# Road accidents involving weak users in Modena (2014)

## UTENTI DEBOLI INFORTUNATI PER MEZZO DI TRASPORTO - COMUNE DI MODENA

ANNI	PEDONE		VELOCIPEDE		CICLOMOTORE		MOTOCICLO		TOTALE	
	Feriti	Morti	Feriti	Morti	Feriti	Morti	Feriti	Morti	Feriti	Morti
	2006	103	1	225	6	193	1	205	-	726
2007	124	4	233	2	198	1	193	4	748	11
2008	125	4	232	1	156	-	177	3	690	8
2009	143	-	246	1	182	-	164	4	735	5
2010	129	5	241	1	137	1	158	2	665	9



Analizzando gli "utenti deboli" feriti in incidenti stradali, dal 2006 al 2010, si registra un incremento del 25% di pedoni e un 7% di velocipedi. In controtendenza nello stesso periodo, si segnala un decremento del 29% di ciclomotoristi e un 23% di motociclisti.

Analyzing the number of road accidents there is a 22 % decrease from 2000 to 2010. Concerning weak users, there is a decrease in the amount of people being injured from 2006 to 2010 but for pedestrians and two wheelers it remains a matter on which we must work on.



Modena Municipality

## HEAT results for Modena

- 1) There is a **reduced mortality** as a result of changes in cycling behavior: the average amount of cycling per person per year is expected to increase between pre and post data. The expected decrease in the average mortality risk for our population of cyclists is: **5.13 %**
- 2) The number of individuals cycling is expected to increase between pre and post data: there will be **1,091 additional individuals regularly cycling**, compared to the baseline.
- 3) The **number of deaths** per year that could be avoided by this change in cycling is **0.35**
- 4) **Financial savings** as a result of cycling averaged across 10 years is: **414,000 EUR**



## Dissemination of PHAN results

A **conference**, that took place on March 12th, with town councillors for Health/Environment and for Transport network, members of cycling users associations, Director of the Hospital, an officer of road and traffic local authority, the citizens of Moreali Street and local media.

“**Sunday without cars**” (= only electric cars admitted into the city streets) on April 22nd, a local event created to promote sustainable mobility where Municipality, Sport, Cultural, Childhood Associations planned information points, workshops, art exhibitions, sport labs for adults, children and families. The results of PHAN have been presented to citizens.

**National Health Festival in Pietrasanta** (Tuscany, end of September 2012), one of the most important events concerning health and wellbeing: we will present with a stand in which technicians and administrators of Italian Municipalities can try to use the tool and with a seminar dealing with PHAN and its application in Modena

**Media** The most important local newspapers in Modena published an article about Heat and the event planned for its presentation.



Modena Municipality

Il progetto è stato realizzato dall'Ufficio Città Sane del Comune di Modena, in collaborazione con l'Assessorato alla Pianificazione territoriale, Trasporti e Mobilità, AUSL di Modena, Circostrizione 3, le Associazioni Fiab e Udace.

Per visualizzare le pagine OMS dedicate ad **HEAT** e provare lo strumento online, consultare il seguente link: <http://www.euro.who.int/HEAT>

**INFORMAZIONI:**  
Ufficio Città Sane Comune di Modena  
Via Santi 40 (5° piano) • Modena  
Tel. 059 2033535 • 2368 • 2351  
Fax. 059 2033815  
e-mail: [cittasane@comune.modena.it](mailto:cittasane@comune.modena.it)

In collaborazione con:



## L'ATTIVITÀ FISICA COME INVESTIMENTO PER LA PROMOZIONE DELLA SALUTE E RISPARMIO PER LA COMUNITÀ

La città di Modena partecipa al progetto  
PHAN - Physical Activity Network



L'OMS crea uno strumento informatico in grado di calcolare in € il risparmio prodotto da un intervento che investa sulla promozione della salute dei cittadini. Non solo, lo strumento è in grado di stimare la riduzione del rischio di mortalità che sia il risultato di una regolare attività fisica.

Lo strumento si chiama **HEAT** - Health Economic Assessment Tool ovvero "Strumento di valutazione economica di salute". **HEAT** valuta l'efficacia di progetti che hanno l'obiettivo di spingere i cittadini ad usare regolarmente la bicicletta per spostarsi in città (**HEAT for cycling**) oppure ad incrementare la loro attività podistica (**HEAT for walking**).

### HEAT può essere utilizzato in diverse situazioni pratiche:

- 1 Quando si progetta una pista ciclabile o pedonale, lo strumento permette, attraverso una stima, di valutare concretamente il rapporto costi/benefici prima di passare alla realizzazione pratica dell'intervento.
- 2 Quando si vuole calcolare il livello di rischio di mortalità dei cittadini dopo aver osservato le loro abitudini ciclistiche e podistiche.
- 3 Quando si desidera stimare la variazione del rischio di mortalità data dalla realizzazione di un progetto che andrà a modificare le abitudini delle persone per quanto riguarda il muoversi a piedi o in bicicletta.
- 4 Quando si intende calcolare in euro e stimare in percentuale i benefici di cui gioverebbero amministrazioni locali e cittadini di diverse fasce d'età se si aumentasse in modo regolare l'attività fisica fatta a piedi o in bicicletta.

### Modena ha sperimentato HEAT for cycling:

abbiamo scelto di applicare lo strumento dell'OMS al progetto di completamento della pista ciclabile in via Moreali che raggiunge il Policlinico e i Pollambulatori dal Centro Storico.

#### La sperimentazione:

16 domande per ottenere la valutazione dello strumento, le prime 8 richiedono i dati reali dello scenario pre-intervento mentre le restanti i dati stimati dello scenario post-intervento.

#### I principali risultati:

- Il rischio di mortalità scende del 5,13%
- Il risparmio pubblico annuo è di 414.000€
- Il risparmio pubblico calcolato in un arco di 10 anni è di 4.139.000€

## Modena PHAN Leaflet



Modena Municipality



**A picture from “Sunday without cars” on April 22<sup>nd</sup> 2012**



Modena Municipality



## After PHAN... lesson learned

Working on PHAN improved inter-sectorial collaboration within the Municipality of Modena;

rising interest about WHO tool among Sport associations who hope that HEAT can be used to evaluate not only cycling or walking but also other sports, in particular they suggest that the Tool could estimate a daily swimming activity;

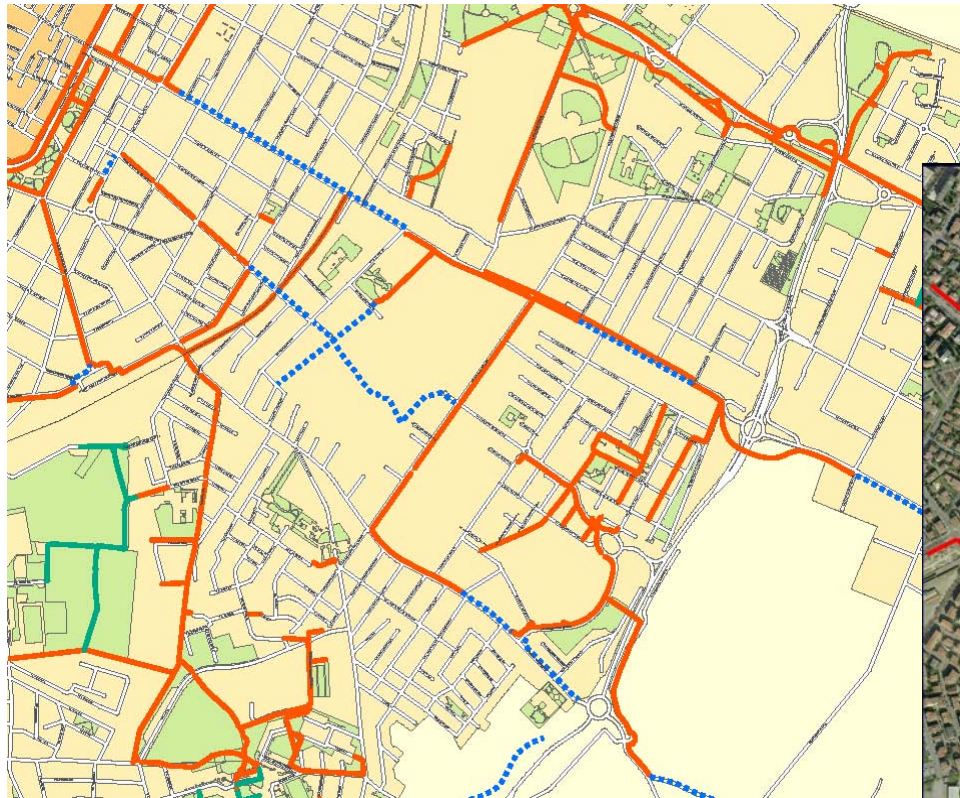
thanks to the HEAT estimates we gave a concrete demonstration to the citizens of Via Moreali about the utility of the cycling path (anyway it wasn't enough to prevent citizens' dispute);

it would be extremely interesting to use HEAT on other cycling paths to be carried out in the coming years, in order to evaluate the cost savings and gain in health for the citizens.



# ..... And we have realized the cycle lane!!

(From the city centre to hospital - university)



Modena Municipality

THANK YOU!



Facebook: [facebook.com/retecittasane](https://facebook.com/retecittasane) – Twitter: [twitter.com/retecittasaneoms](https://twitter.com/retecittasaneoms)  
[www.retecittasane.it](http://www.retecittasane.it) - [cittasane@comune.modena.it](mailto:cittasane@comune.modena.it)

