

PHAN

Physical Activity Networking

Practical application of HEAT in Modena



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Transport for Healthy Urban Environments



City of Modena - Italy

Dr Simona Arletti

Modena Town Councillor for Environment Policies

Chair of Italian Healthy Cities Network



Modena Municipality



Modena Municipality

The project is promoted by WHO and European Commission



Partner Cities:

Modena (Italy)

Kuopio (Finland)

Brighton & Hove (UK)

Pärnu (Estonia)



Context

- WHO estimated that in the European Region almost one million of deaths per year are attributable to insufficient levels of physical activity
- Physical inactivity has become the fourth cause of death in high -income countries.



PHAN approach:

- to promote supportive environments that allow all parts of the population to make the healthy choice the easy choice.
- to go beyond the prevention, increasing the positive effects on the people well-being. The effects produced by a daily physical activity involve mental and physical conditions (heart disease and type 2 diabetes, hypertension, some forms of cancer, anxiety and depression or stress and loneliness).
- to promote a stronger collaboration between health sector and non-health sectors such as urban planning, transport, sport and cultural sectors.
- to sustain an European network of experts and stakeholder on the planning of healthy environments, working out new strategies and improving tools, examples, good practices and guidance for physical activity promotion at local levels.



WHO believes that the **international sharing of the local ideas** on the promotion of physical activity is a good chance to better the current situation.

WHO created **HEAT (Health Economic Assessment Tool)**, it offers a concrete help to justify policy and funding decisions about urban planning, calculating the possible impact of the intervention on the city mobility. Moreover it estimates the value of reduced mortality that results from regular walking or cycling.

HEAT can be a useful to demonstrate the importance of the interventions to promote physical activity because it can quantify savings and benefits through health and economic data.

www.heatwalkingcycling.org/



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.



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€.



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.



First step: collecting data/2

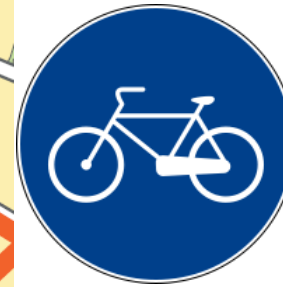


Every half an hour the operators had detected numbers of cyclists on two main crossroads where a lot of people go cycling to University Hospital, to School, to public health services, or on the contrary go to the City centre.


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).





Map of Modena
zone of the intervention

 Cycle and pedestrian routes existing and pending completion

 Cycle and pedestrian paths to the next project

 Intervention area

Source: Charter of biking and walking trails of the Municipality of Modena - year 2011

According to the classification of the road on the City of Modena, "Via Moreali" is classified as Interquartiere road.





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



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.

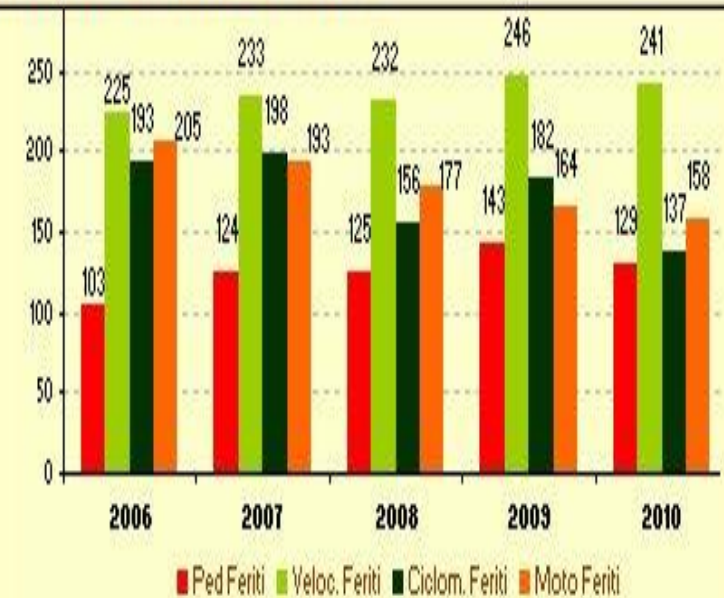
The total cost for the realization of the new stretch of cycling path is:
40.000 €



Road accidents involving weak users in Modena (2011)

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.



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: 3 events planned during 2012:

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.



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 Flab 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 Sanil 40 (5° piano) • Modena
Tel. 059 2033535 • 2368 • 2351
Fax. 059 2033815
e-mail: 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





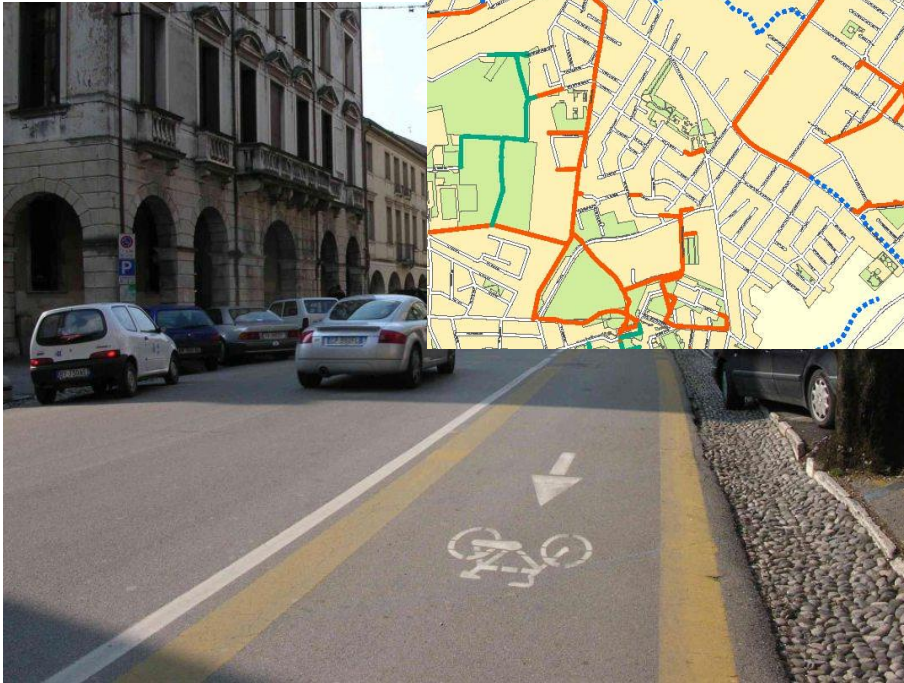
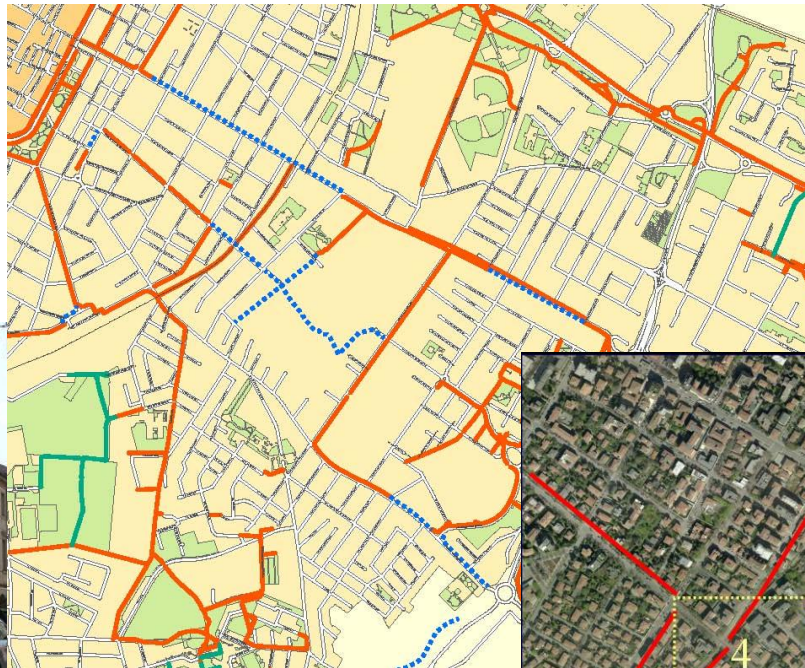
A picture from “Sunday without cars” on April 22nd 2012

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 started!!



Thank you for the kind attention!



Simona Arletti

Contacts:

Healthy Cities Office - Modena Municipality

Tel: 0039 059 2033535

E mail: cittasane@comune.modena.it