



*IV Conference of Regional and Urban Planning International Conference of
the Community Participation in Planning Erasmus+ Project*

PARTICIPATION IN PLANNING AND PUBLIC POLICY

Gathering environmental indicators through
participatory science:

The e-Planning approach

23 Feb 2017

Pedro Ferraz de Abreu

UA - MIT - CITIDEP



universidade
de aveiro

Joint PhD Program on e-Planning



2012-16 © Pedro Ferraz de Abreu



ICT at the core of the "Smart" trends

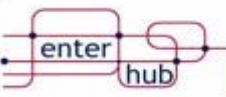
Smart Cities

- The "Smart" drive
 - Big Data Problem
 - Key technological advances, f.i. transportation
- Participatory Science revisited
 - Industry strategies
 - Municipality & Region strategies
 - Integrated vs. Distributed data gathering



New Strategic Thinking for ICT & Public Policy

Smart Cities



ENTER.HUB
Thematic Workshop 3. New Technologies - Smart Cities
INTRODUCTION
Lugano, 20-21 February 2014

AN URBACT II PROJECT

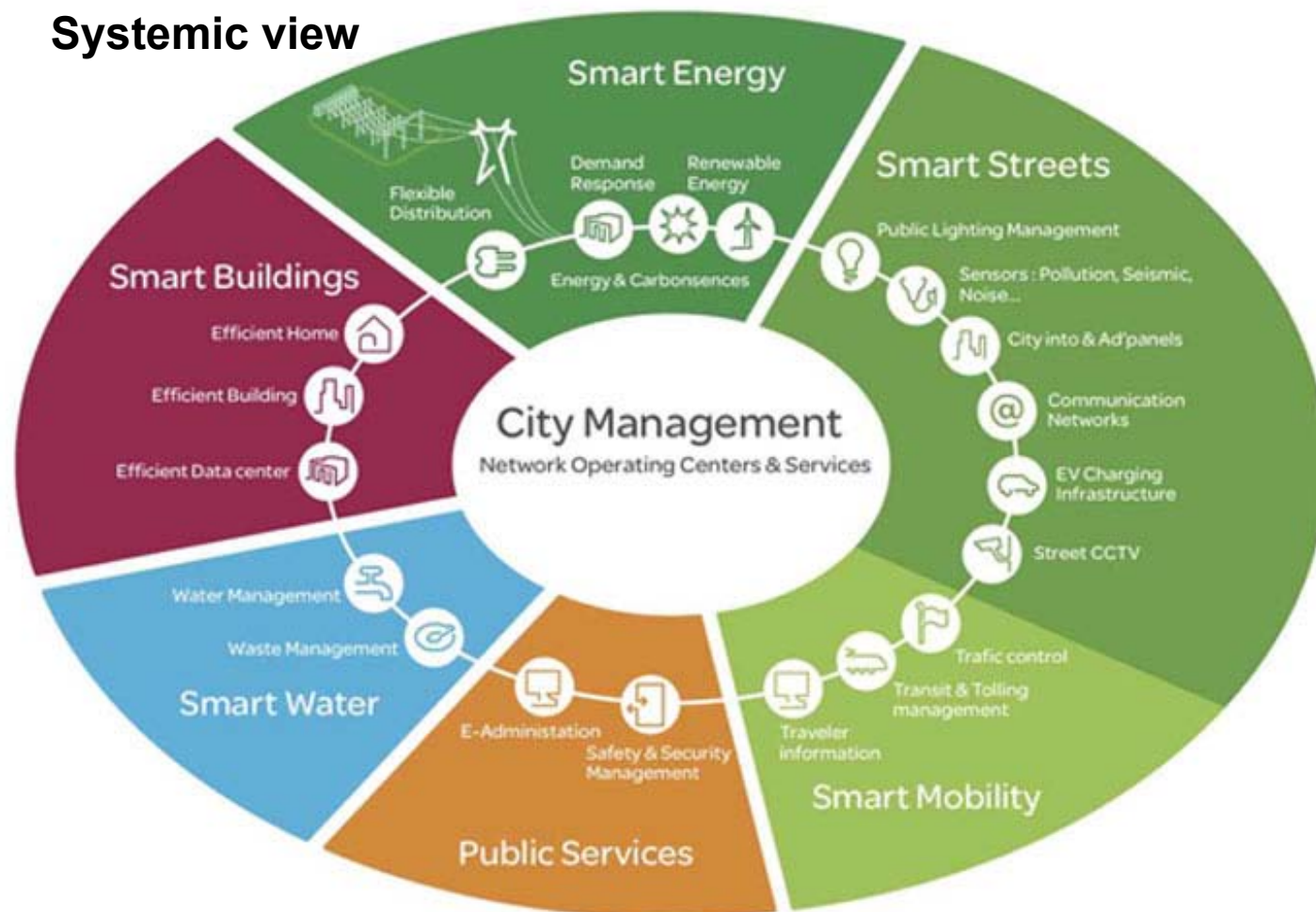


 **Pedro Ferraz de Abreu** 
Connecting cities
Building successes



New Strategic Thinking for ICT & Public Policy

Systemic view

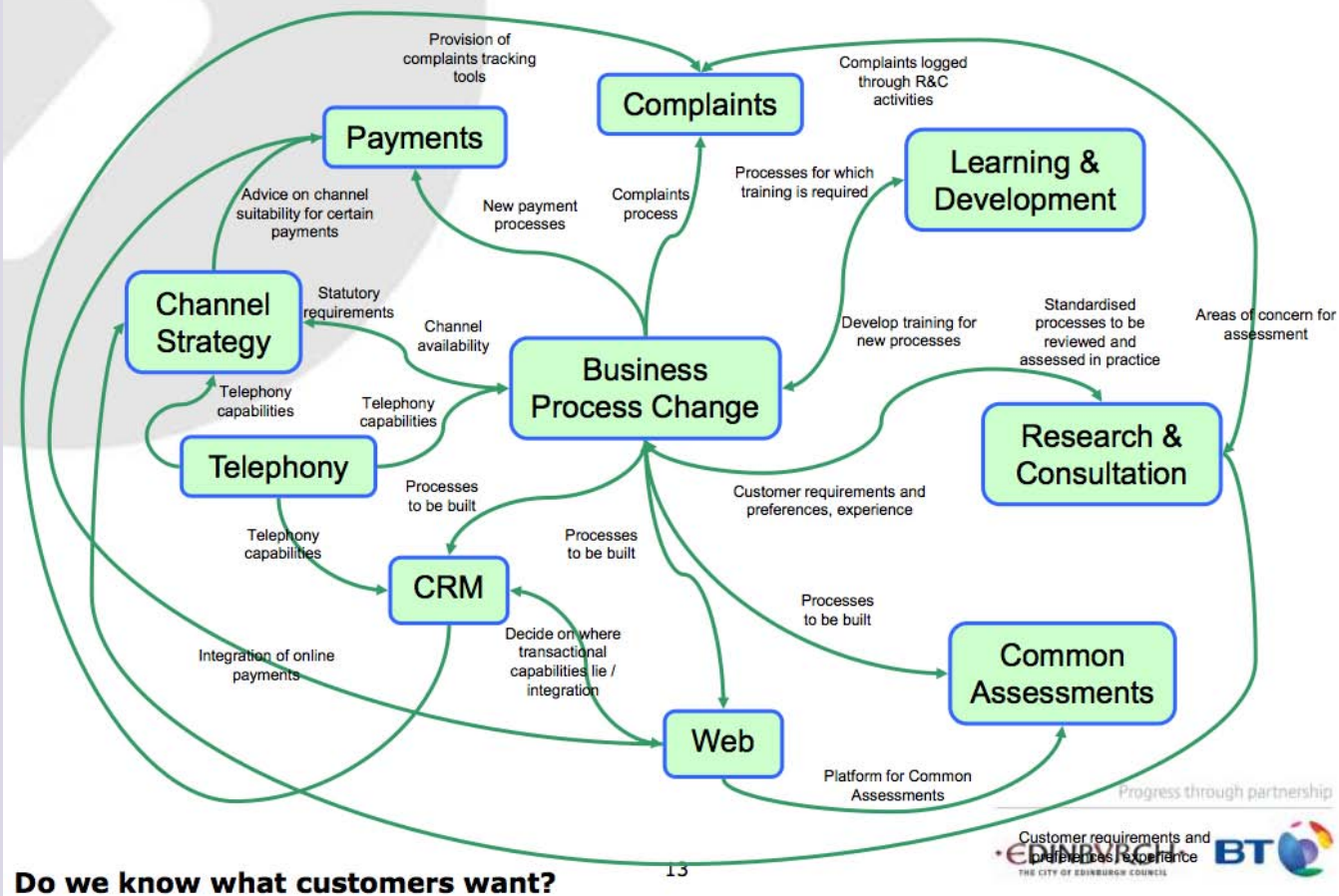




New Strategic Thinking for ICT & Public Policy

The Reality?

delivering the
smart city





Smart Cities

ICT is not enough to warrant good integration

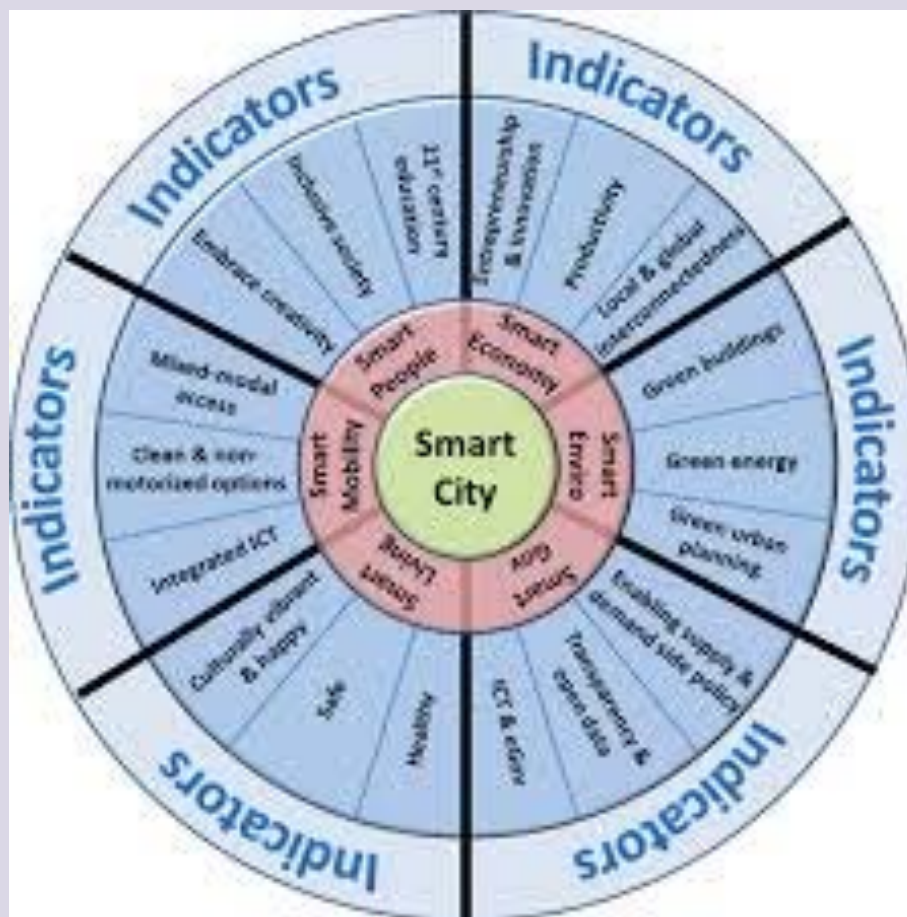
We need to think about

- Institutions
- Processes
- Regulatory framework
- Political reality



New Strategic Thinking for ICT & Public Policy

- Data is the core of "smartness"

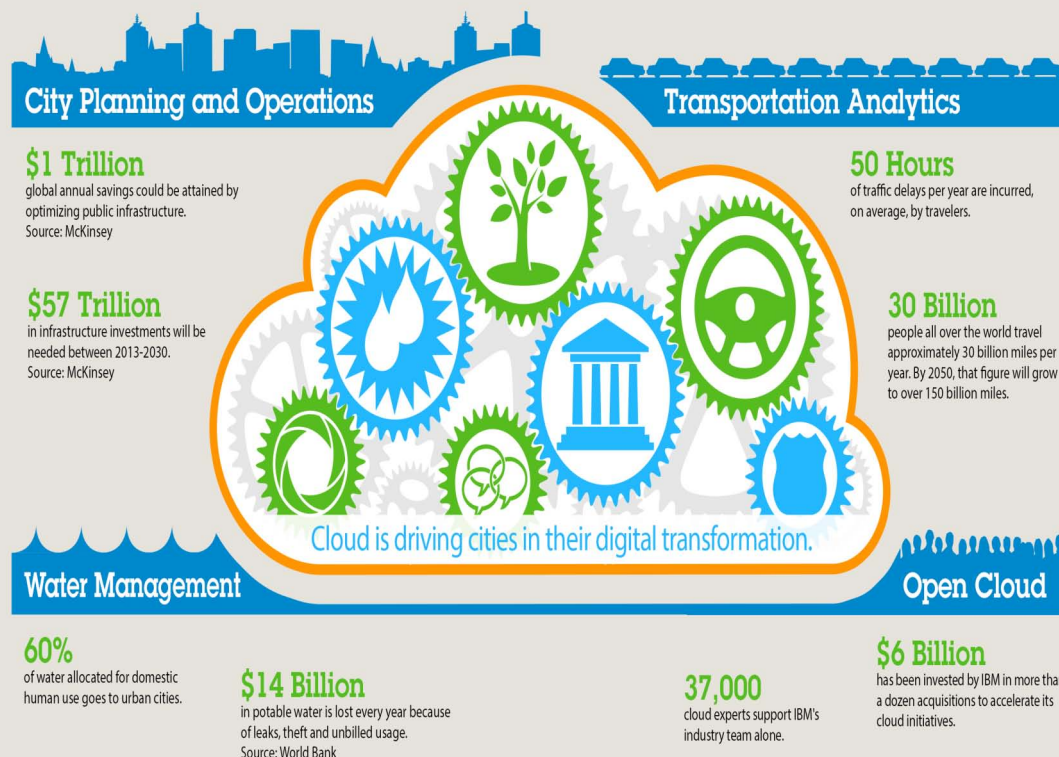




New Strategic Thinking for ICT & Public Policy

• Data is power

Smarter Cities: Turning Big Data Into Insight



IBM Intelligent Operations software is designed with cities, for cities, to provide the tools to monitor, visualize and analyze vital city services such as water and wastewater systems, transportation, infrastructure planning, permit management and emergency response.

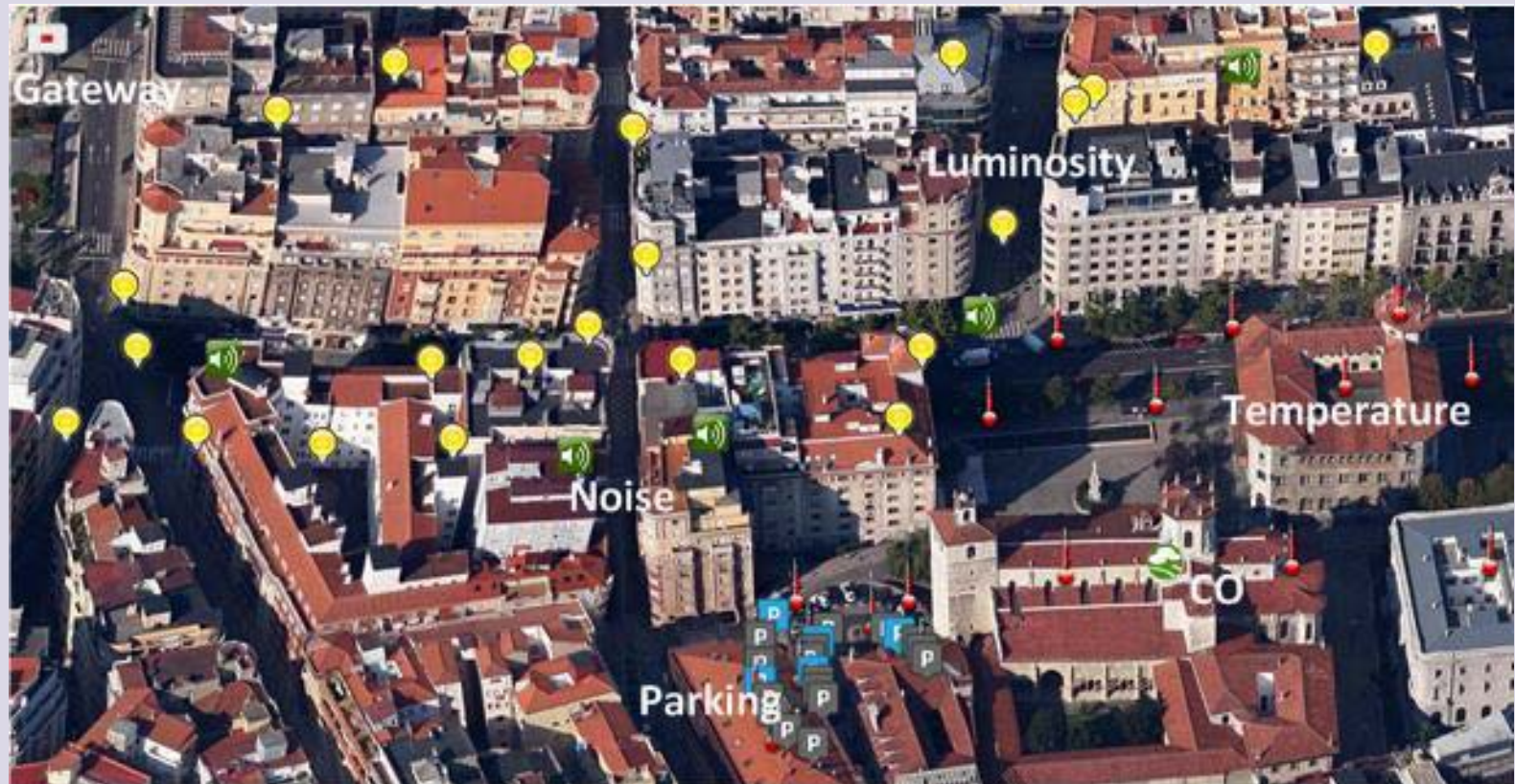




New Strategic Thinking for ICT & Public Policy

- Data is power

Integrated systems - sensors





New Strategic Thinking for ICT & Public Policy

- **Data is power**

Integrated systems - sensors



Santander – Espanha. 1200 sensors to monitor trafic, air quality, noise...



New Strategic Thinking for ICT & Public Policy

ICT enables satisfying niches and special needs...

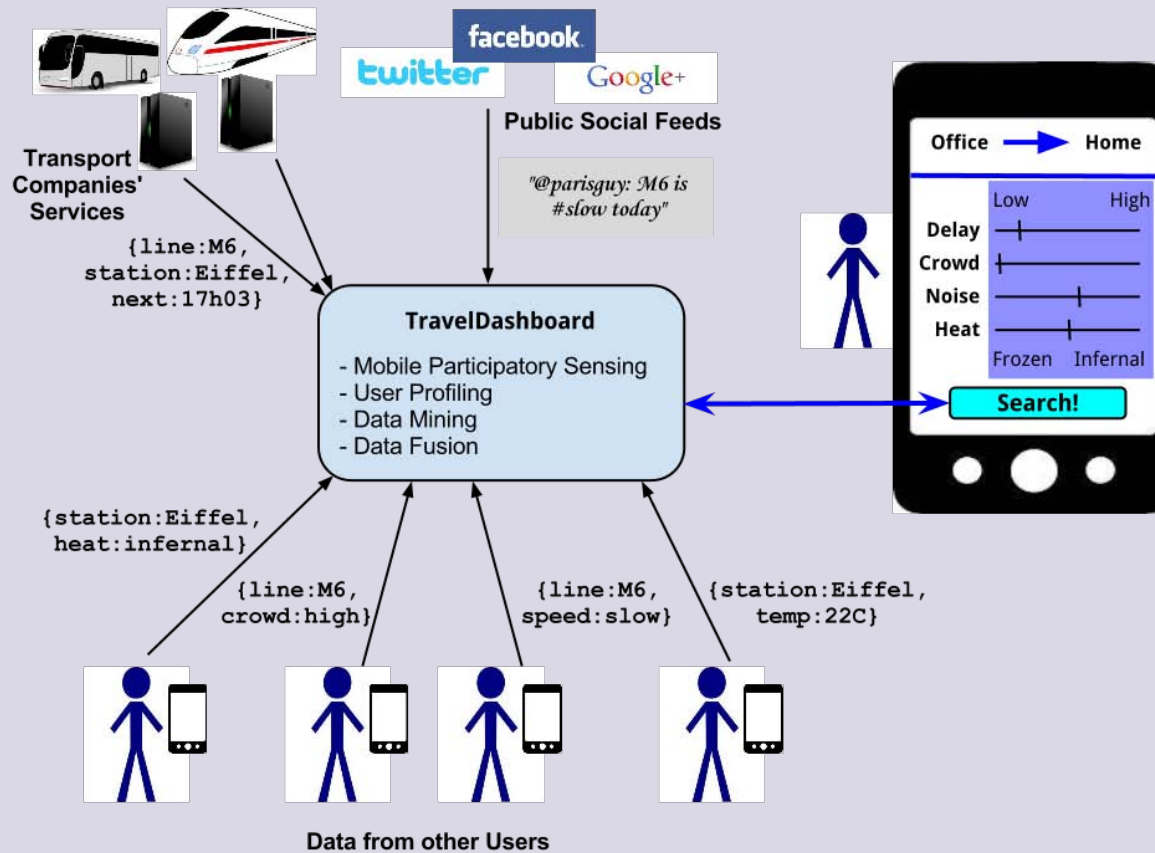


Caceres – Espanha – aplicação móvel que permite portadores de deficiência física encontrar rotas acessíveis e reportar barreiras ou inacessibilidades.



New Strategic Thinking for ICT & Public Policy

Participatory solutions are exploding...



citizen participation brings empowerment

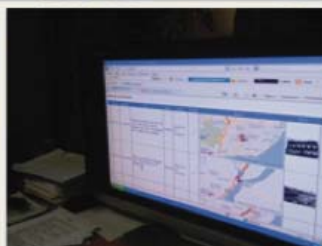


New Strategic Thinking for ICT & Public Policy

... but we need to internalize citizen data gathering processes in local government

GIP - “Gestão Inclusiva Participada”

Participatory municipal management



Junta de freguesia
Vila Franca
de Xira



Android - smart-phone
software for citizen
participation, integrated
with municipal
management tools and
procedures





New Strategic Thinking for ICT & Public Policy

- Data is power

www.eurolifenet.eu

mobile sensor participatory science



Sensors, but with citizen participation...



New Strategic Thinking for ICT & Public Policy

The New York Times
nytimes.com

June 12, 2007

Parents and Health Experts Try to Ease Italy's Pollution

By [ELISABETH ROSENTHAL](#)

MILAN — This part of northern [Italy](#) is renowned for fashion, food, Fiat. But now it has another, less welcome claim to fame: the cities here have the worst air pollution in Europe.

By mid-May, Milan had already exceeded [European Union](#) and [World Health Organization](#) limits for particle pollution in the air on 80 days. Last year was bad, too. By the end of March, Milan had 64 such days, Turin had 77, Bologna 51 and Venice 49.

Particulate pollution is tied to heart disease and respiratory ailments like asthma, and poor lung development in children.





New Strategic Thinking for ICT & Public Policy

- **Data is power**

LabTec TS Team has experience in science research within large european (EU) teams

www.citidep.net/people/



EUROPEAN COMMISSION
Community research



projecto
PEOPLE
Lisboa

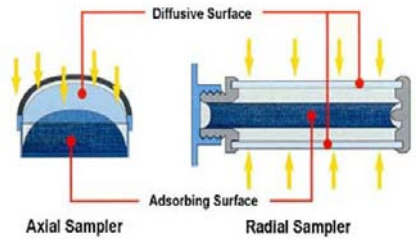
PEOPLE Project Population Exposure to Air Pollutants in Europe

People behind PEOPLE

- P. Pérez Ballesta, E. De Saeger, R. Field, A. Baeza, I. Nikolova, R. Connolly, R., N. Cao, M. Gerboles, D. Buzica **for the Joint Research Centre**
- R. Fernandez-Patier, D. Galán D, S. Garcia Dos Santos, J. Santamaria Ballesteros **for Madrid**
- Pascal DeMulder and Sandrine Bladt **for Brussels**
- Ana Cabral, Pedro Ferraz de Abreu, Francisco Ferreira, Hugo Tente, Luisa Nogueira **for Lisbon**
- Matej Gregoric and Peter Otorepec **for Ljubljana**
- Emilia Niciu **for Bucharest**
- Martin Fitzpatrick, Anne Marie McCarten and Pat Goodman **for Dublin**

Pascual Pérez Ballesta
Institute for Environment and Sustainability
DG Joint Research Centre
European Commission

The PEOPLE project (2002-2005) is coordinated by the Joint Research Centre with the aim of assessing the exposure of citizens to air pollutants in different European cities



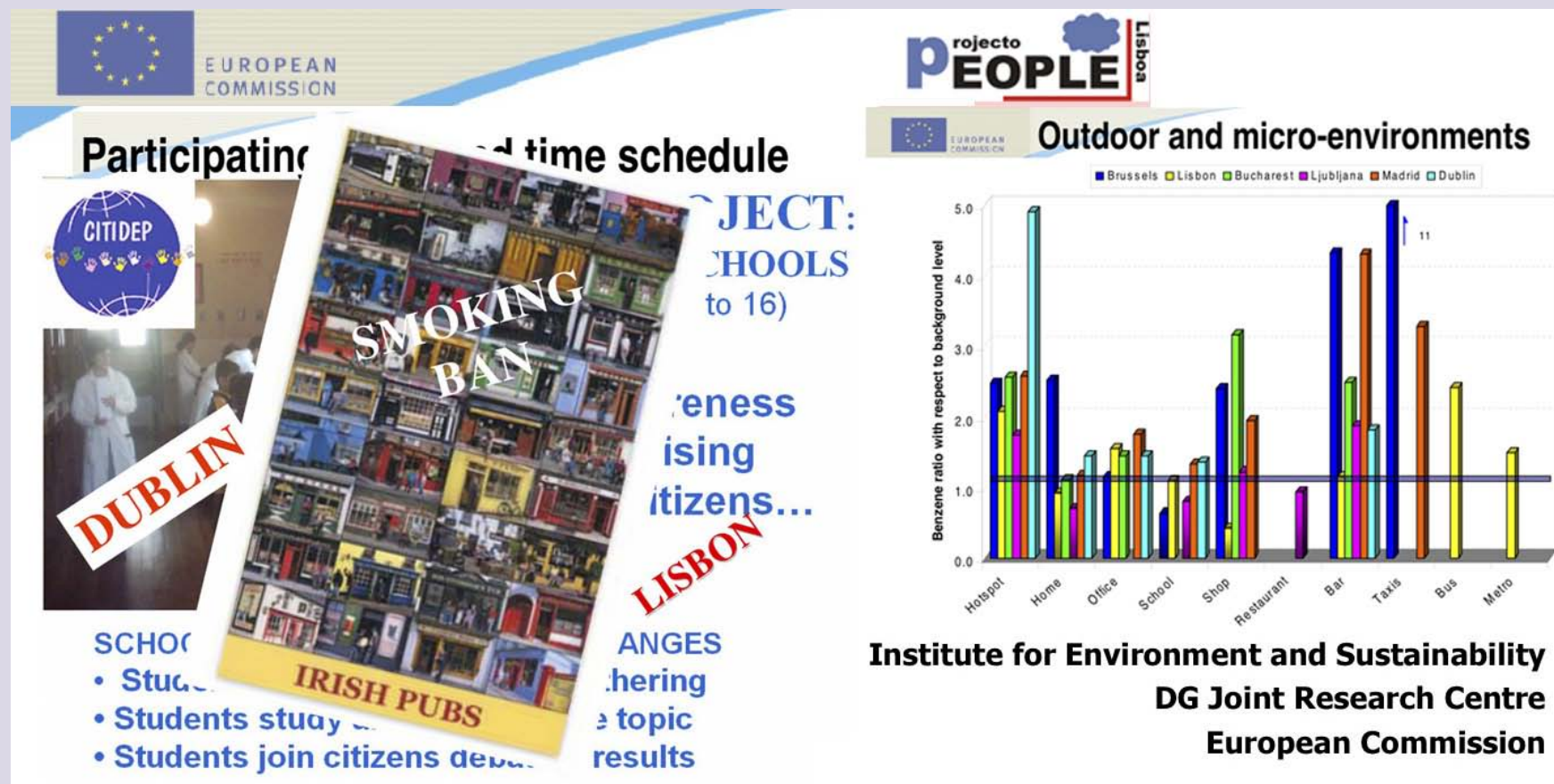


New Strategic Thinking for ICT & Public Policy

• Data is power

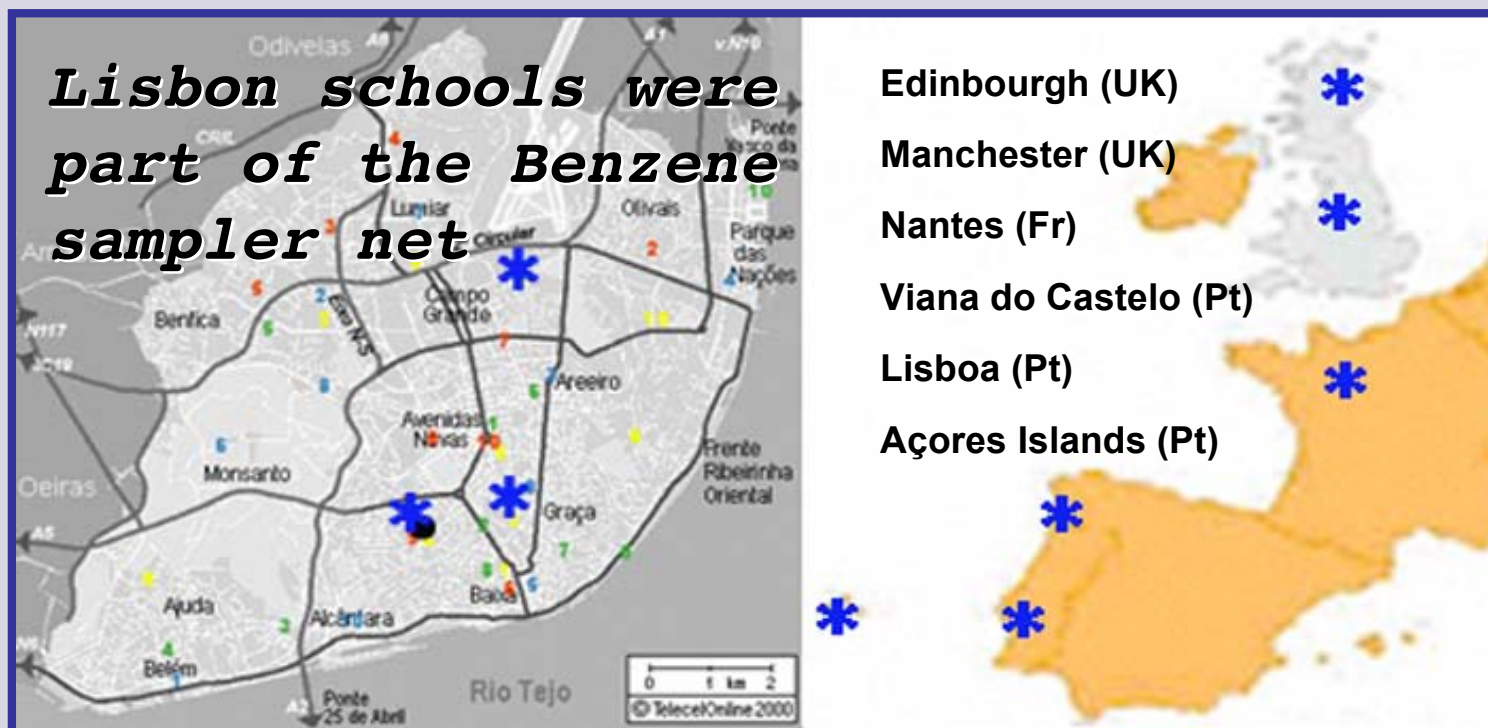
LabTec TS Team has experience gathering large scale air quality indicators with citizens

www.citidep.net/people/





CITIDEP promotes **networks** with scientists, teachers and students



Using **Internet** (web broadcast) and **videoconference** to allow access of remote areas and student communities abroad



PEOPLE CITIDEP Project 2002-2003



Highschool students work with Scientists & Experts

15 October 2002



<- Lisboa

Viana ->



Videoconference and Internet broadcasting, with PEOPLE's expert, for students from the 10nd grade



PEOPLE CITIDEP Project 2002-2003



Highschool students work with Elementary school students



Students in Lisbon say goodbye
to students in Viana do Castelo



Activity: “ The air exists,
although we can't see it”

PEOPLE Videoconference
and Internet broadcasting II
with chat for students
from the 2nd and 3rd grade





EURO-LIFE-NET:



Participatory Science:

Citizen's role enabling local indicators for local planning

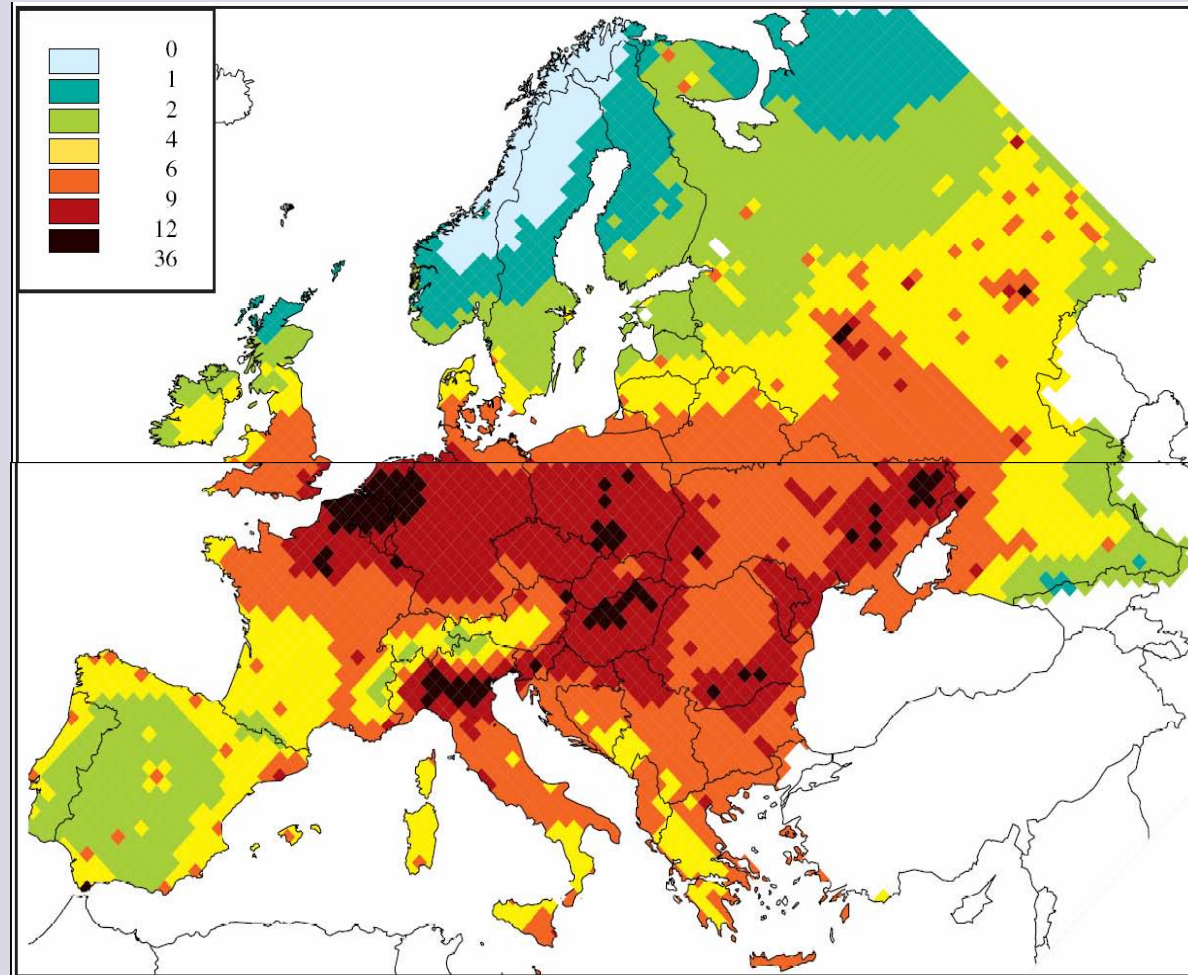




Loss in life expectancy attributable to exposure to fine particulate matter - 2000

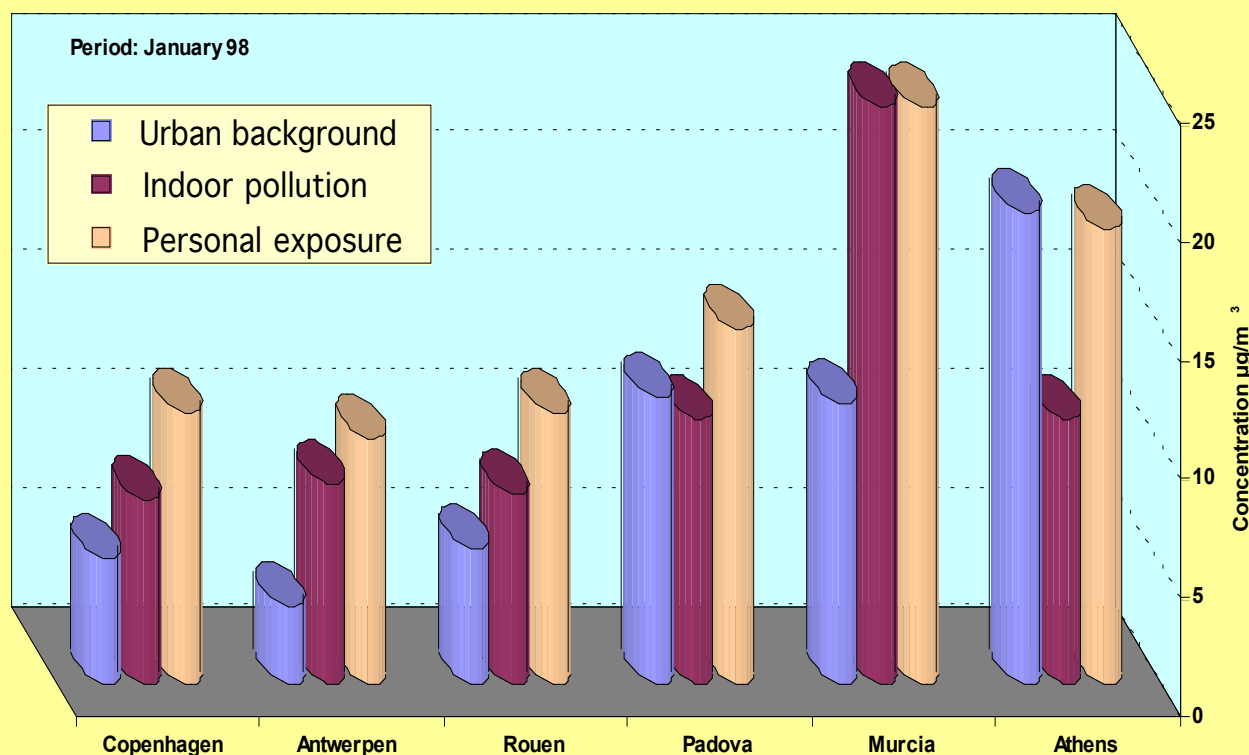
Loss in statistical life expectancy (months) that can be attributed to the identified anthropogenic contribution to PM_{2.5}, for the emissions of the year 2000.

Calculation results for the meteorological conditions of 1997.
Source: IIASA





Key aspects for health impact assessment



Personal exposure: up to 2 times urban background levels

Source: LIFE MACBETH project



CITIDEP - Research Center on Information Technology and Participatory Democracy

**ENVIRONMENT - HEALTH - CITIZENSHIP
EDUCATION FOR SUSTAINABLE DEVELOPMENT**

Needs:

Personal Exposure Data

Raising Awareness

Promoting Citizenship

Teaching Experimental Sciences

Problems:

Expensive, Resource-hungry

Often Superficial, Non-sustained

Political correct does not work

Requires resources & motivation

www.citidep.pt • www.eurolifenet.eu • www.citidep.net



EURO-LIFE-NET:

CITIDEP PROGRAM

In each School in the EuroLifeNet, groups of students lead by a teacher will “adopt” each an “**EuroLifeNet Node**”, and keep a regular record of indicators measured on this Node.

Node ID: School, GPS Long/Lat/Z, type

Nodes may be indoor or outdoor

Bio-Physics measures at the Node

Socio-economic measures in a circle (or grid) centered at the Node

Composite data (tracing data around the node, eg. students carrying sensor 24h measuring personal exposure, with diary)



Program timetable: Set-up (2005-06) ; Pilot Project (2006-07) ; Expansion (2007-2014)



EURO-LIFE-NET:

CITIDEP PROGRAM

All “**EuroLifeNet Nodes**” share their data and integrate it at multiple scales, “feeding” different uses and aggregate records. Procedures can be incorporated in curricula.

Adoption of common data protocols

Data validation procedures with institutions

Sets of tool kits for schools and teachers

Use of integrating tools and architectures*

Events inter-schools and public awareness

Scalable + modular, easy procedure to join



* BOINC - Berkeley Open Infrastructure for Network Computing (boinc.berkeley.edu) / GLOBE (www.globe.gov)



EURO-LIFE-NET:

CITIDEP PROGRAM (with IES-JRC kind support)

Pilot Project with focus on Particulate Matter (PM 2.5)
Contribute to EU (APHEIS, JRC/IES) Environment-Health Strategy
In sync with UN ***“Education for Sustainable Development” Decade***

Scientific Coordination by IES-JRC

10-20 Schools in EU, distributed East-West, North-South, urban and non-urban

Portable PM samplers + local station (right)

Local partnerships with Schools +
Gov/PAd + Environment/Health Institutions
+ NGOs

Funding application to “LIFE+” and other



Pilot project timetable: Set-up (2005-2006) ; School implementation (2006-2007)



EURO-LIFE-NET:

CITIDEP PROGRAM (with IES-JRC kind support)

Pilot Project with focus on Particulate Matter (PM10 / PM 2.5)
Contribute to EU (APHEIS, JRC/IES) Environment-Health Strategy
In sync with UN ***“Education for Sustainable Development” Decade***

IES-JRC equips* EuroLifeNet schools and coordinate scientific procedures

Students carry portable PM sampler (right), a portable GPS and make a 12 h diary

One student at a time, with different habits and trajectories, will provide a rich map

Other associated projects may benefit from this pilot EuroLifeNet project, and amplify it



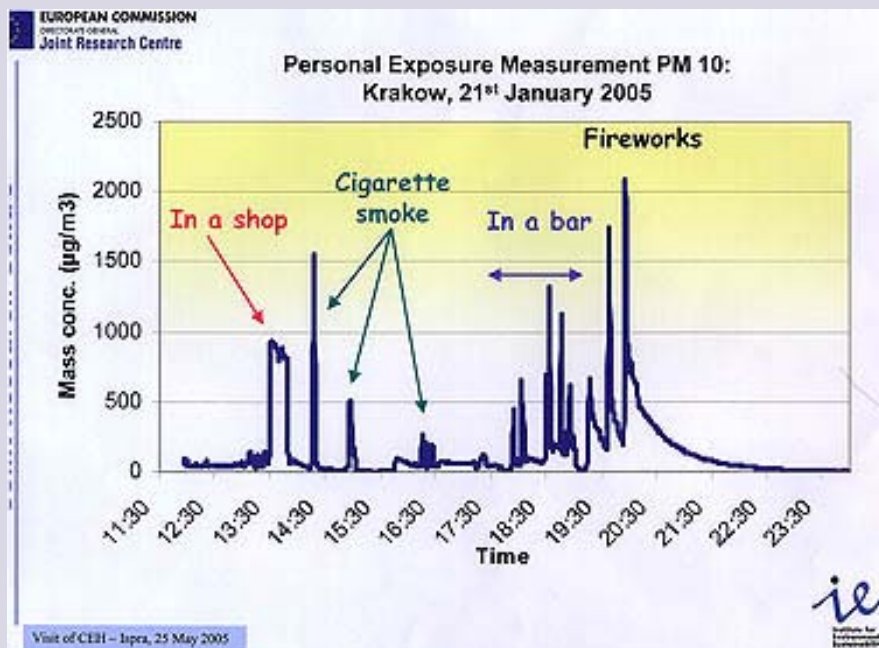
* IES-JRC will lend the PM samplers to designated schools, for the project duration



EURO-LIFE-NET:

CITIDEP PROGRAM (with IES-JRC kind support)

The electronic nature of the portable samplers allows for easy data extraction, network sharing and analysis. Together with a diary and GPS data, this will be a powerful tool both for scientists and teachers.



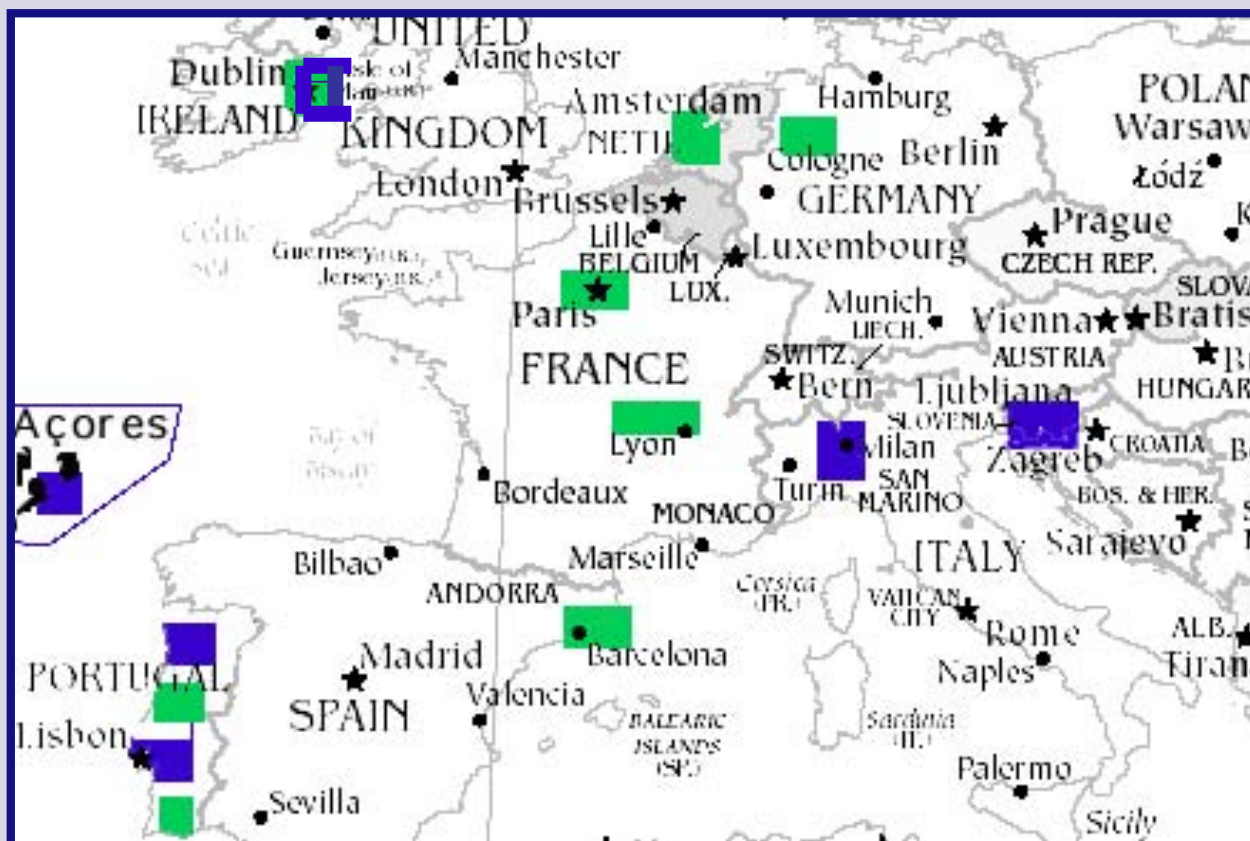


EURO-LIFE-NET:

CITIDEP PROGRAM (with IES-JRC kind support)

Students: 665
(measuring: 235)
Teachers: 51
Researchers: 11
Experts: 5

HighSchools: 10
Universities: 4
Research C.: 5
NGOs: 3



PROGRAM [2005 - 2014]

PILOT PROJECT [2006 - 2007]

EXPANSION [2008->]



EURO-LIFE-NET:

CITIDEP PROGRAM (with IES-JRC kind support)

Experts & scientists

Teachers

Civic action





EURO-LIFE-NET:

CITIDEP PROGRAM (with IES-JRC kind support)

Building Partnerships: **Experts & scientists** **Teachers** **Civic action**

JRC - IES

Ministry of Science

Ministry of Environment

Ministry of Education

Schools

Non-Governmental Orgs





EURO-LIFE-NET:

CITIDEP PROGRAM (with IES-JRC kind support)

Building Partnerships: **Experts & scientists** **Teachers** **Civic action**

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EURO-LIFE-NET:

CITIDEP PROGRAM (with IES-JRC kind support)

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CITIDEP PROGRAM (with IES-JRC kind support)

Building Partnerships: **Experts & scientists** **Teachers** **Civic action**

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Ministry of Science

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EURO-LIFE-NET:

CITIDEP PROGRAM (with IES-JRC kind support)

A Joint Agenda:

Experts & scientists

Teachers

Civic action

What to measure

When to measure

How long to measure

How to measure

Network Synchronism

Use of data





EURO-LIFE-NET:

Negotiating Agendas is a critical part of the process

	Experts & scientists	Teachers	Civic action
What to measure	PM 2.5	No strong preference	PM 10
When to measure	• Seasonal • Also weekend/night	• According to curricula • Day only, no w/e	• When pollution is worse
How long to measure	1 month minimum, at least twice a year	1 or 2 weeks, at most twice a year (2/year)	As long as possible
How to measure	Always same person per period / sampler	Many different students per period	As many students as possible, also adults
Network synchronism	Little sync. value; Concentrate all resources one site at a time	High sync. value; All schools in sync, for short periods of time $\leq 2/\text{year}$	High sync. value; All in sync, as frequently as possible
Uses of data	• Correlate with regular monitoring network data; • Environment/health correlations	• Relate with other course curricula; • Curricula update, exciting participatory science methodology; • Student debate/raising awareness.	• Public raising awareness; • Data as political tool for stronger regulation; • Call for more monitoring and pro-active solutions.



EURO-LIFE-NET:

CITIDEP PROGRAM (with IES-JRC kind support)

A Joint Agenda:

Experts & scientists

Teachers

Civic action

What to measure

When to measure

How long to measure

How to measure

Network Synchronism

Use of data





EURO-LIFE-NET:

CITIDEP PROGRAM (with IES-JRC kind support)

TRAINING

Experts

Teachers





EURO-LIFE-NET:

CITIDEP PROGRAM (with IES-JRC kind support)

TRAINING

Experts

Teachers



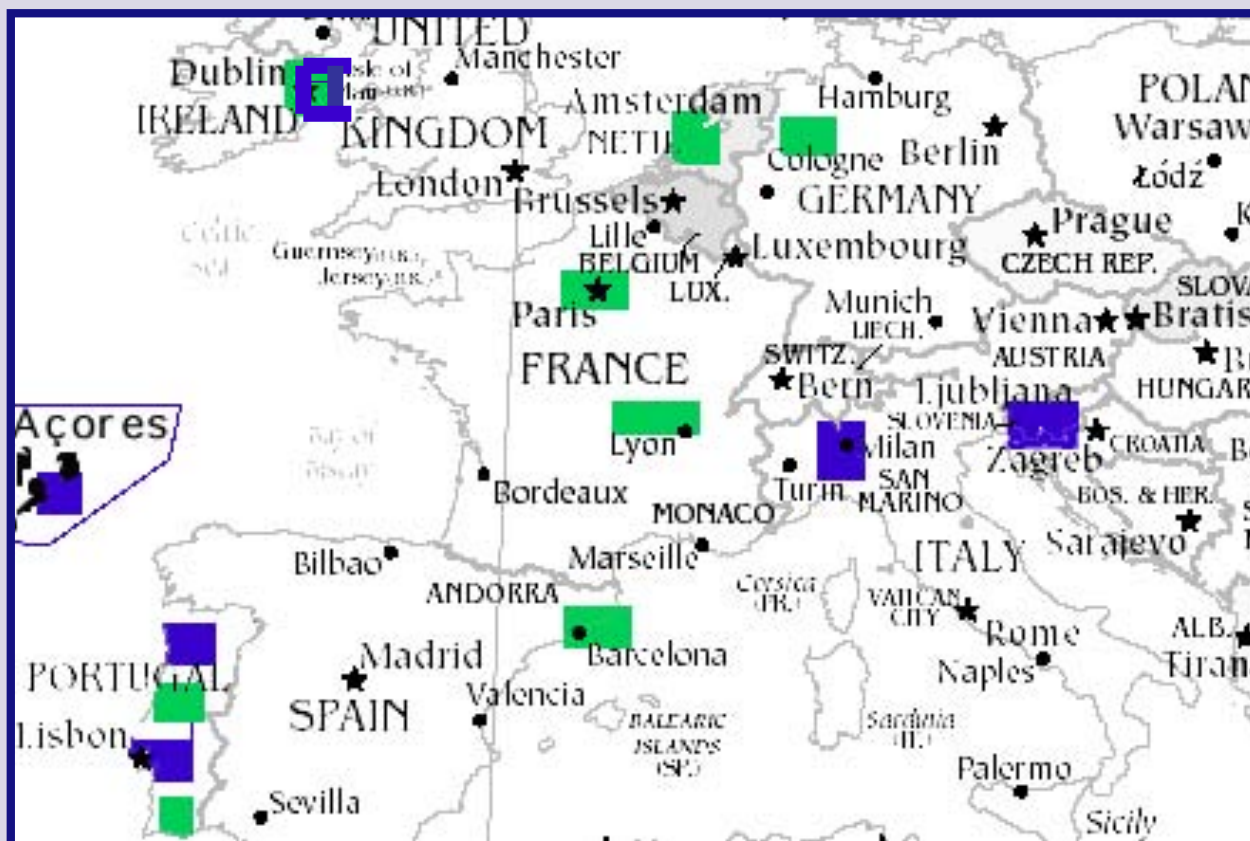


EURO-LIFE-NET:

CITIDEP PROGRAM (with IES-JRC kind support)

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PROGRAM [2005 - 2014]

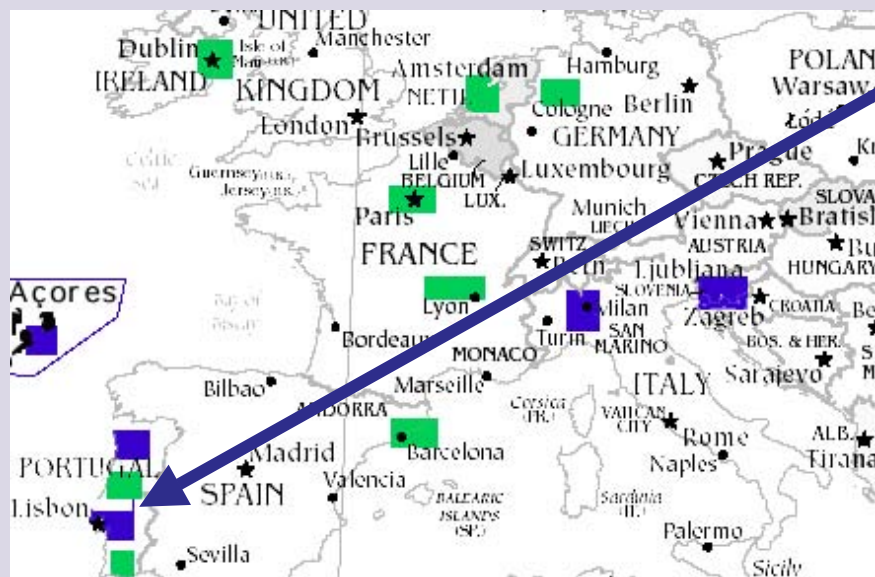
PILOT PROJECT [2006 - 2007]

EXPANSION [2008->]



EURO-LIFE-NET:

CITIDEP PROGRAM (with IES-JRC kind support)



LISBOA CLUSTER :

- **CITIDEP Lisboa**
- **Ministry of Environment, Lisbon V.T.
Air Quality Division**
- **Universidade Nova Lisboa
Dpt Ambiente**
- **Instituto de Ciências Sociais-UL**
- **1 partial post-doc**
- **3 Highschools**
Pedro Nunes, Maria Amalia
Anselmo Andrade (Almada)
- **1 Elementary school** (Torel)

Classes: 15 basic + sec. (14-17)
Students: 340 (82 with devices)
Teachers: 18



EURO-LIFE-NET:

CITIDEP PROGRAM (with IES-JRC kind support)



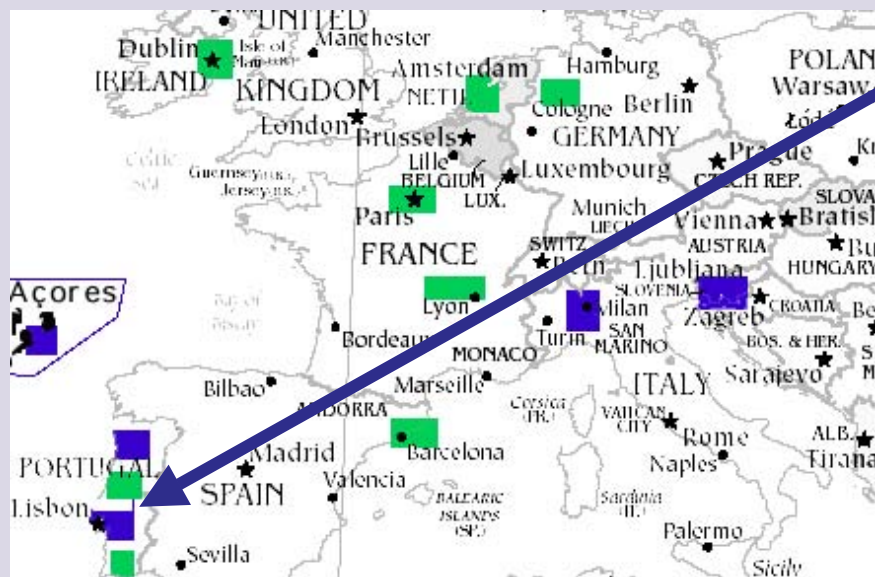
LISBOA CLUSTER :





EURO-LIFE-NET:

CITIDEP PROGRAM (with IES-JRC kind support)



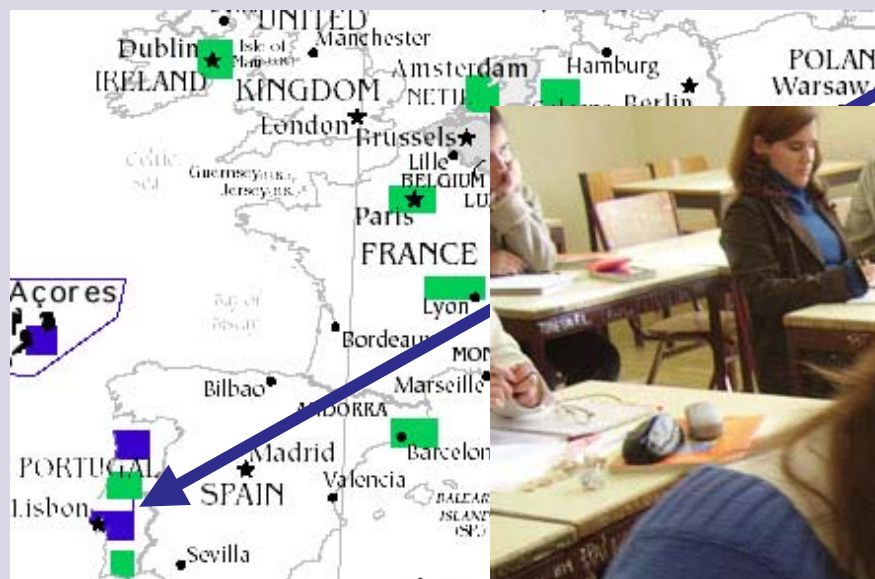
LISBOA CLUSTER :





EURO-LIFE-NET:

CITIDEP PROGRAM (with IES-JRC kind support)



LISBOA CLUSTER:





EURO-LIFE-NET:

CITIDEP PROGRAM (with IES-JRC kind support)



LISBOA CLUSTER :





EURO-LIFE-NET:

CITIDEP PROGRAM (with IES-JRC kind support)



LISBOA CLUSTER:





EURO-LIFE-NET:

CITIDEP PROGRAM (with IES-JRC kind support)



LISBOA CLUSTER :





EURO-LIFE-NET:

CITIDEP PROGRAM (with IES-JRC kind support)



VIANA do CASTELO CLUSTER :

- **Escola Superior de Educação-IPVC**
- **Universidade do Minho, Dpt Fisica**
- **1 Master Thesis**
- **CITIDEP Viana do Castelo**
- **2 Highschools**
Ponte de Lima,
Póvoa Varzim

Classes: 2 basic + sec. (14-17)

Students: 45 (39 with devices)

Teachers: 4 + 3 (ESE)



EURO-LIFE-NET:

CITIDEP PROGRAM (with IES-JRC kind support)



VIANA do CASTELO CLUSTER :





EURO-LIFE-NET:

CITIDEP PROGRAM (with IES-JRC kind support)



VIANA do CASTELO CLUSTER :





EURO-LIFE-NET:

CITIDEP PROGRAM (with IES-JRC kind support)



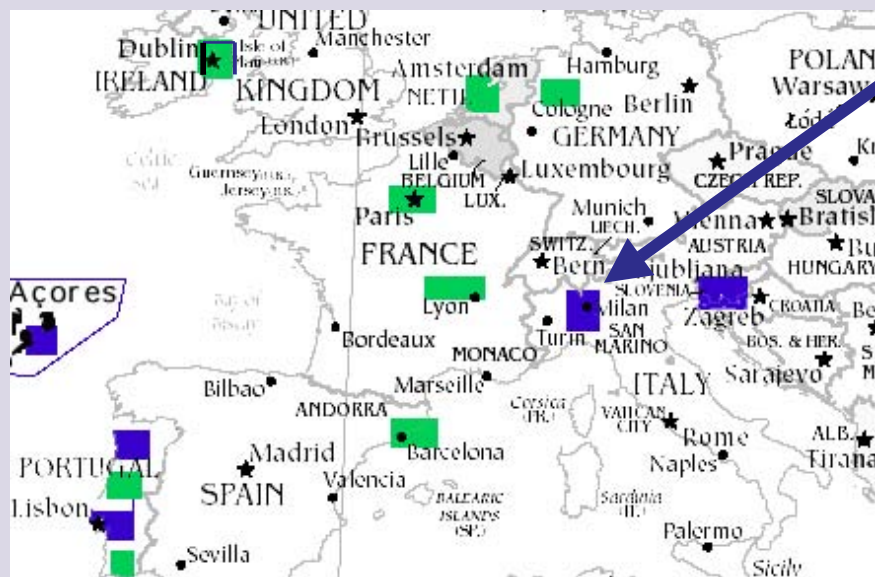
VIANA do CASTELO CLUSTER :





EURO-LIFE-NET:

CITIDEP PROGRAM (with IES-JRC kind support)



MILAN CLUSTER:

- **Mamme Antismog di Milano**
- **Milan Istituto dei Tumori**
- **3 Highschools**
- **CITIDEP Firenze**

Classes: 7 basic + sec. (13-18)

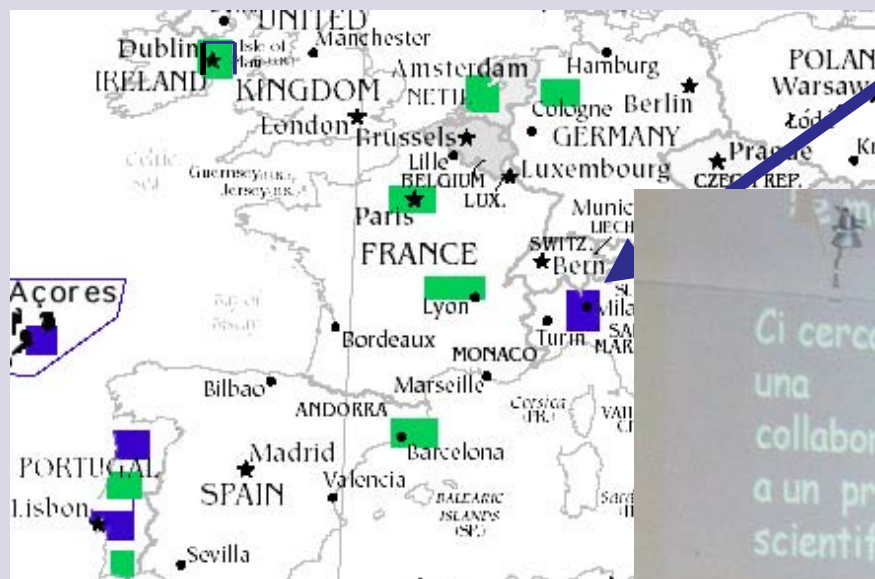
Students: 200 (90 with devices)

Teachers: 12



EURO-LIFE-NET:

CITIDEP PROGRAM (with IES-JRC kind support)



MILAN CLUSTER:

- **Mamme Antismog di Milano**



Classes: 7 basic + sec.
(13-18)

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Teachers: 12



EURO-LIFE-NET:

CITIDEP PROGRAM (with IES-JRC kind support)



MILAN CLUSTER:

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Classes: 7 basic + sec.
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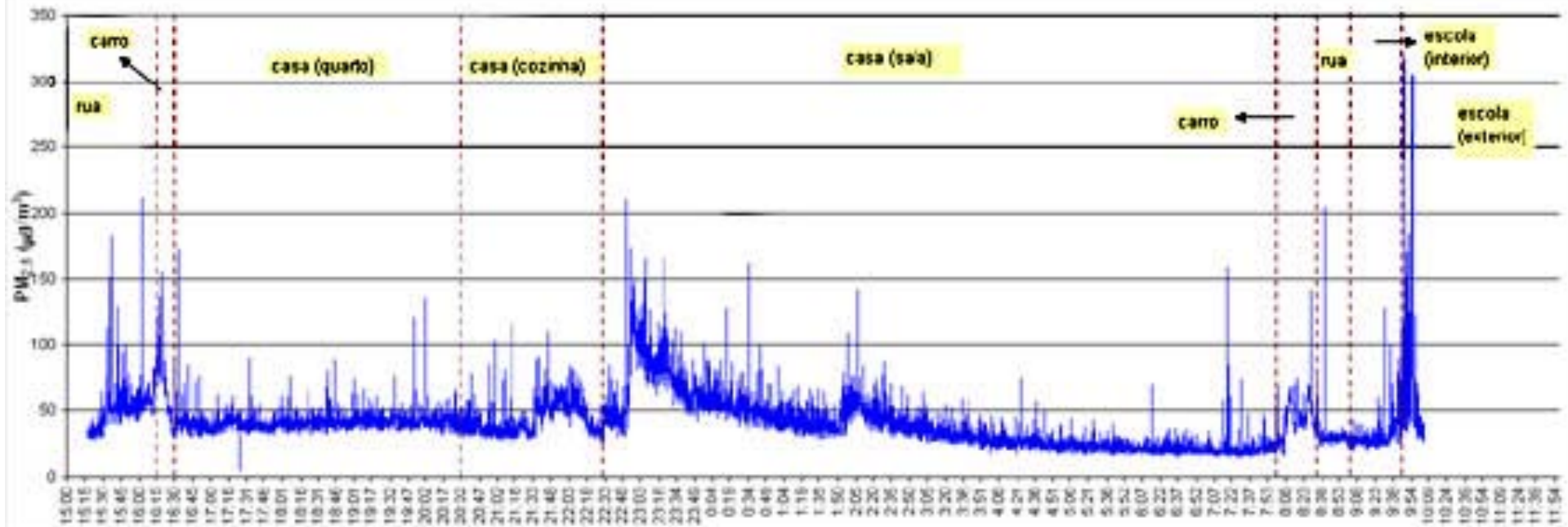
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Example of Student Measure - Lisbon November 2006

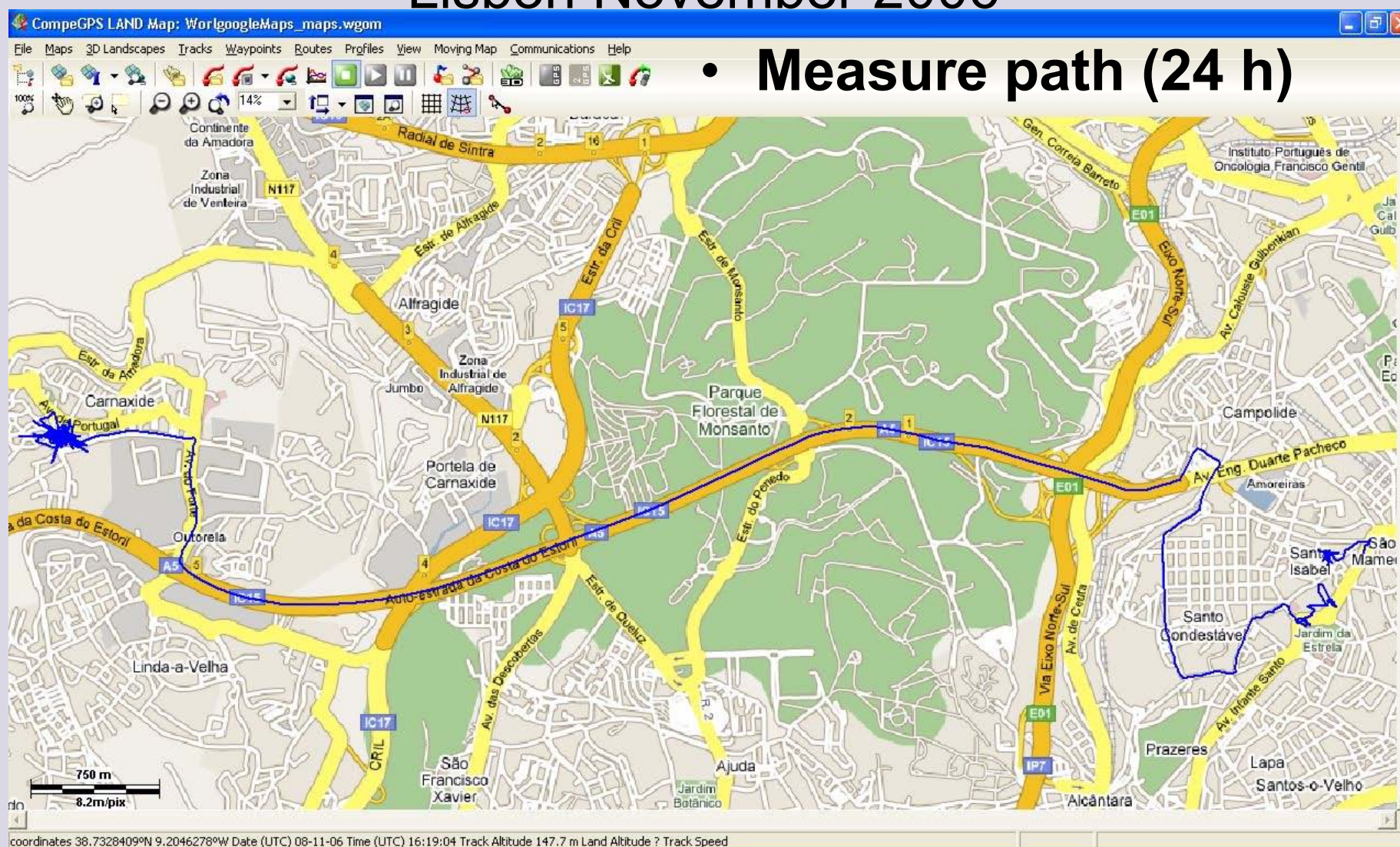
- PM 2.5 Graphic (24 h)





Example of Student Measure - Lisbon November 2006

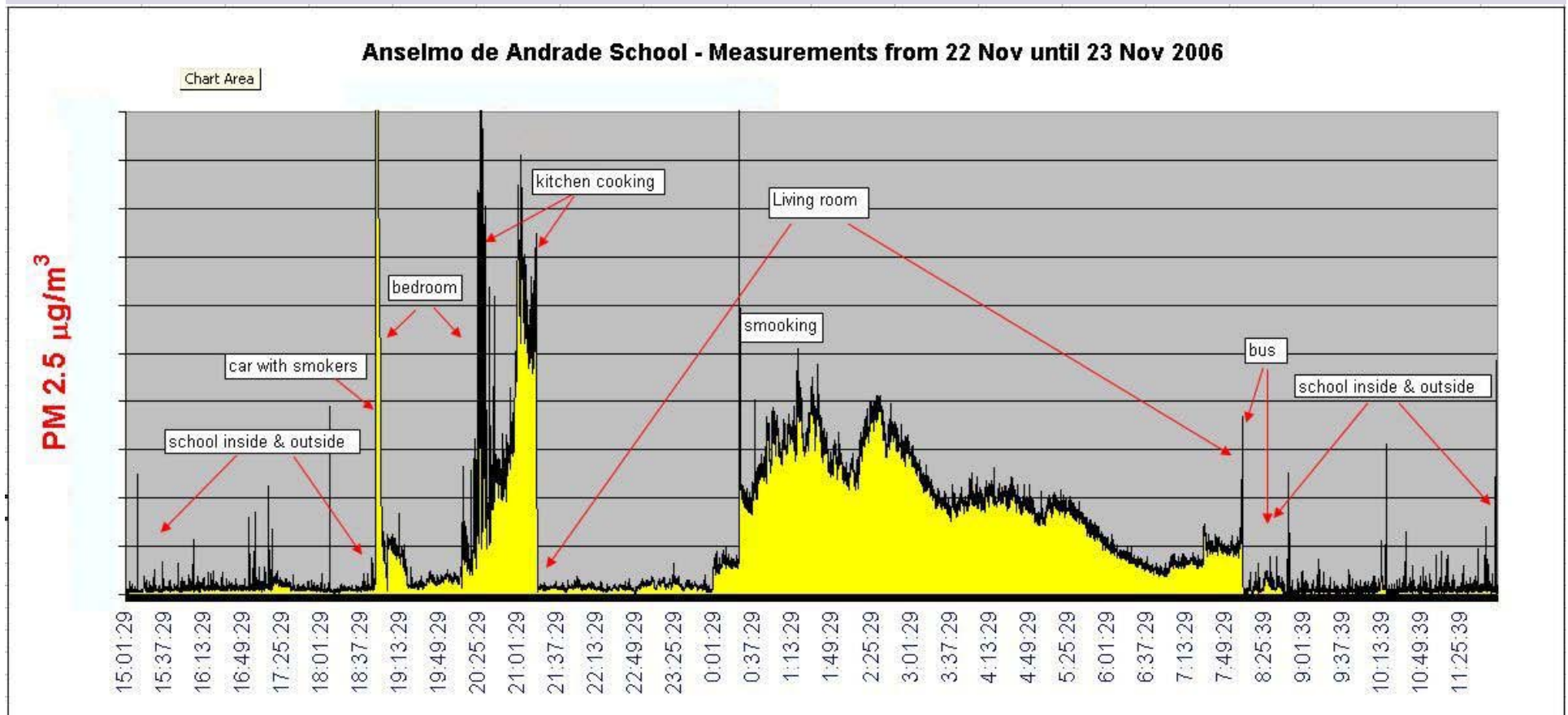
- **Measure path (24 h)**





Example of Student Measure - Lisbon November 2006

- PM 2.5 Graphic (24 h)





EURO-LIFE-NET:

CITIDEP PROGRAM (with IES-JRC kind support)

Analysis

Experts

Researchers





EURO-LIFE-NET:

CITIDEP PROGRAM (with IES-JRC kind support)

Analysis

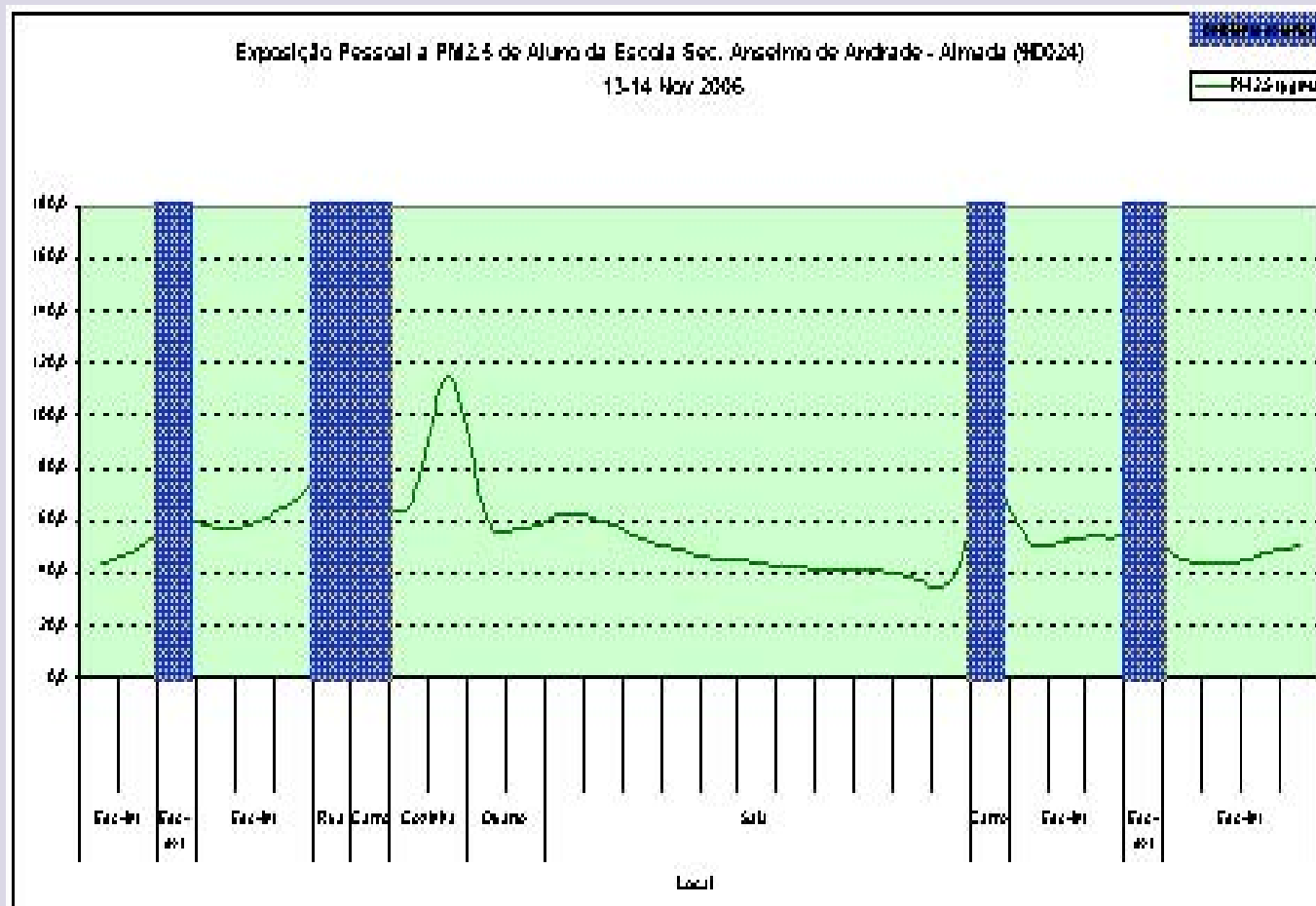
Experts

Researchers





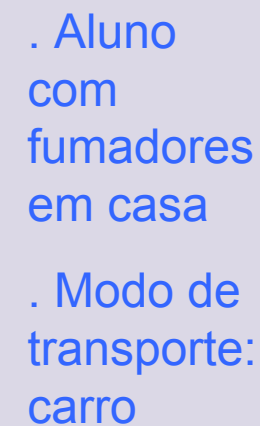
Almada



. Aluno não fumador e sem fumadores em casa

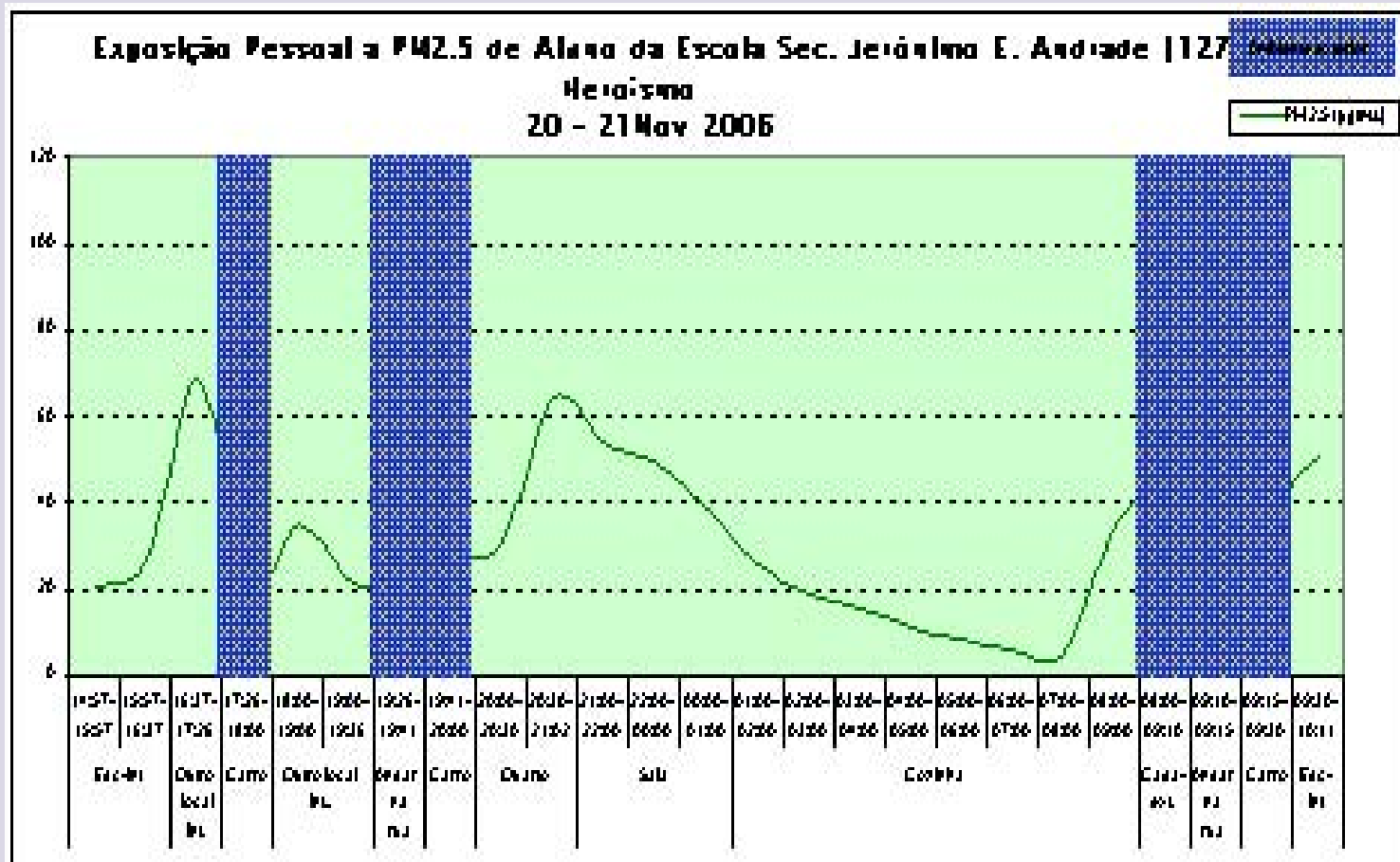
. Casa próxima de zona com trânsito

. Modo de transporte: carro





Açores – Ilha Terceira

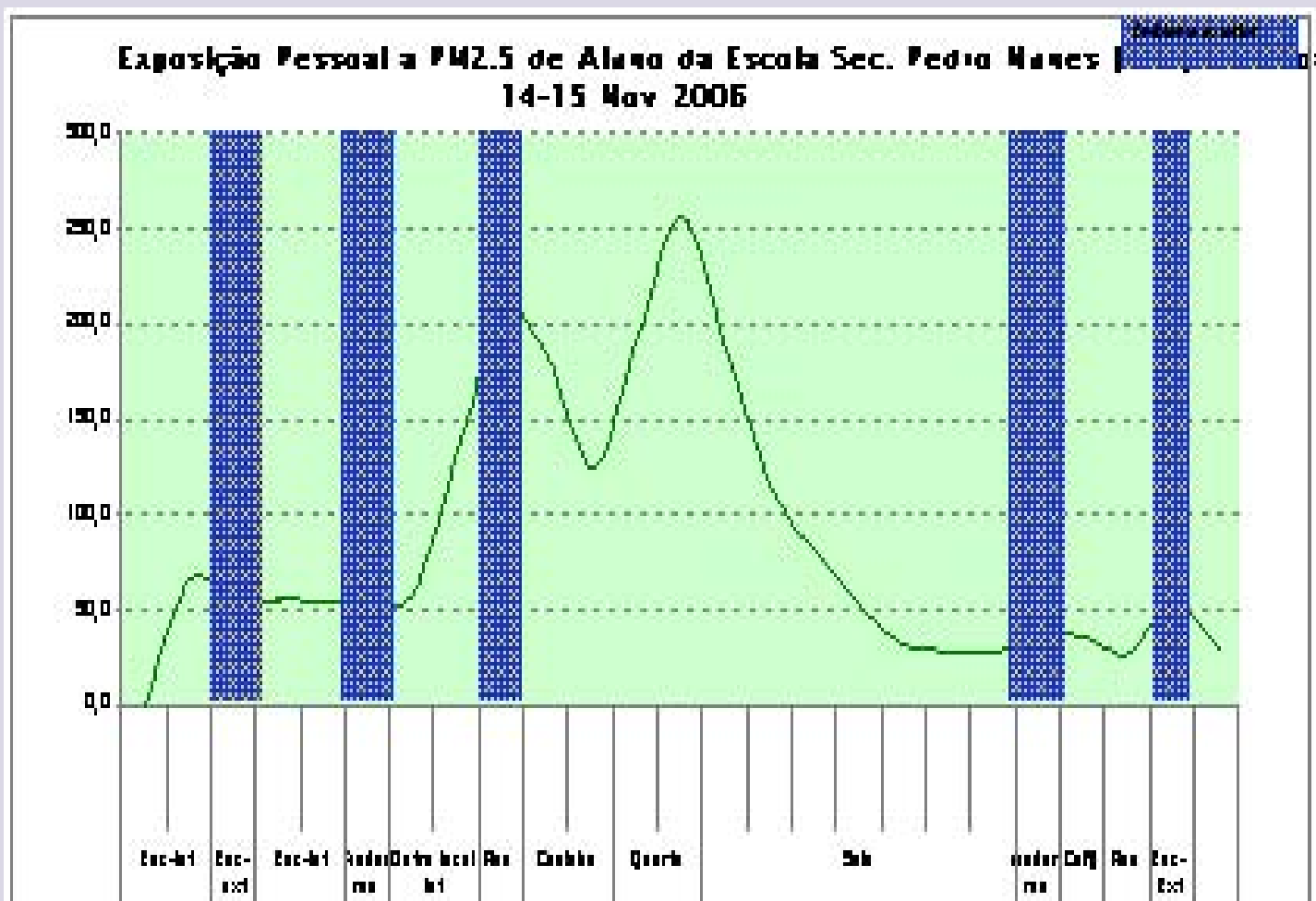


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 . Casa próxima de zona com trânsito

Modo de transporte: carro



Lisboa ES Pedro Nunes



. Aluno não fumador e sem fumadores em casa

Modo de transporte: a pé



EURO-LIFE-NET:

CITIDEP PROGRAM (with IES-JRC kind support)

II MEETING

1 June 2007





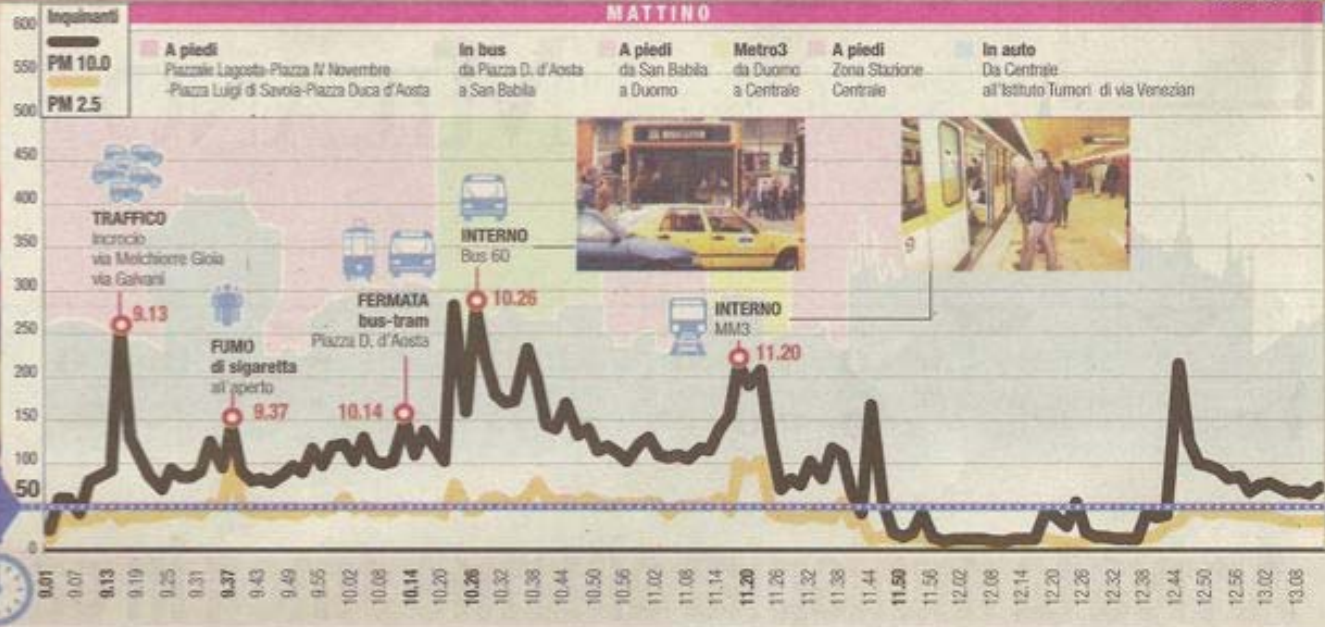
Media

1 Milano

CORRIERE DELLA SERA LUNEDÌ 25 SETTEMBRE 2006

Snapz P

Viaggio tra i veleni



«Ecco quanto smog si respira a Milano Allarme polveri anche in casa e in metrò»

Per la prima volta misurata l'aria minuto per minuto con una centralina portatile Pm10 oltre i limiti anche al chiuso. In auto il condizionatore acceso riduce i veleni

La legge è categorica e fissa una soglia per l'aria cattiva. Quella che appesantisce i polmoni e nuoce alla salute. Passeggiando in città, in

l'aria realmente respirata dai milanesi quando vanno al lavoro, prendono i mezzi pubblici, escono per fare la spesa. Per verificare sul

spese responsabili, secondo l'Asl, di una morte ogni 4-5 giorni solo a Milano) è fissato in 50 microgrammi per metro cubo d'aria. Ve-

di auto, motorini e autobus che si fermano al semaforo e ripartono: il Pm10 schizza sopra i 250 microgrammi per metro cubo, tornando

Abreu

Alunos Nove escolas portuguesas e uma italiana colaboraram com investigadores para avaliar a qualidade do ar. E ficaram surpreendidos

Os mais novos cientistas do ar

E se o que respiramos está doente?

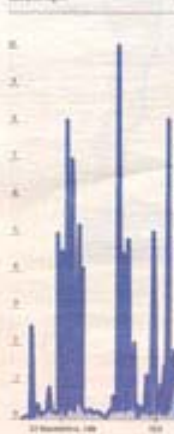
Textos: ALBERTO PEREIRA
Fotos: ALBERTO PEREIRA

Dentro das salas de aula, os alunos do 1.º ano do ensino básico, em Portugal, estão a ser ensinados a ler e a escrever. Mas, ao mesmo tempo, estão a ser ensinados a medir a qualidade do ar que respiramos.

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MECÂNICA DE MICROPARTÍCULAS
Medição de partículas



OS ALUNOS SABEM DE COR E SALTEADO O QUE SÃO AS PM 2.5, QUE NÃO VEM NO PROGRAMA

SÃO MICROPARTÍCULAS SUSPENSAS NO AR QUE TODOS RESPIRAMOS E QUE PODEM SER NOCIVAS

Os alunos do 1.º ano do ensino básico, em Portugal, estão a ser ensinados a ler e a escrever. Mas, ao mesmo tempo, estão a ser ensinados a medir a qualidade do ar que respiramos.

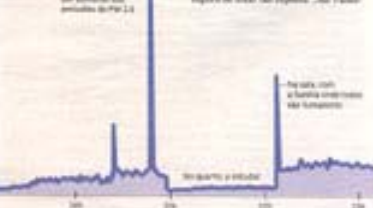


Henrique Pereira, na sala de aula do 1.º ano

No 1.º ano, os alunos estão a aprender a ler e a escrever

Perigo dentro de casa

Os alunos do 1.º ano do ensino básico, em Portugal, estão a ser ensinados a ler e a escrever. Mas, ao mesmo tempo, estão a ser ensinados a medir a qualidade do ar que respiramos.



Com a mãe, na escola, a preparar o jantar

No 1.º ano, os alunos estão a aprender a ler e a escrever

NUMEROS

665

partículas de PM 2.5 por metro cúbico (m³) de ar

235

partículas de PM 10 por metro cúbico (m³) de ar

partículas de PM 2.5 por metro cúbico (m³) de ar

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partículas de PM 2.5 por metro cúbico (m³) de ar

TRÊS PERGUNTAS A
Pedro Ferraz Abreu

Investigador do Centro de Estudos e Investigação Científica do Instituto Tecnológico

Quanto tempo leva a preparar o jantar?

Depende da quantidade de comida que se vai preparar. Mas, em geral, leva entre 15 e 20 minutos.

Quanto tempo leva a preparar o jantar?

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Sol e vento vão à escola

Alunos e professores de uma escola de Vila do Conde, no norte de Portugal, estão a trabalhar para reduzir a sua dependência da eletricidade. Usando painéis solares e ventos, os alunos e professores estão a trabalhar para reduzir a sua dependência da eletricidade.

Alunos e professores de uma escola de Vila do Conde, no norte de Portugal, estão a trabalhar para reduzir a sua dependência da eletricidade.

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The New York Times
nytimes.com

June 12, 2007

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Parents and Health Experts Try to Ease Italy's Pollution

By [ELISABETH ROSENTHAL](#)

MILAN — This part of northern [Italy](#) is renowned for fashion, food, Fiat. But now it has another, less welcome claim to fame: the cities here have the worst air pollution in Europe.

By mid-May, Milan had already exceeded [European Union](#) and [World Health Organization](#) limits for particle pollution in the air on 80 days. Last year was bad, too. By the end of March, Milan had 64 such days, Turin had 77, Bologna 51 and Venice 49.

Particulate pollution is tied to heart disease and respiratory ailments like asthma, and poor lung development in children.



2012-16 © Pedro Ferraz de Abreu



JRC NEWS:

“Pedro Ferraz
de Abreu,
President of the
Joint Research
Center of the
European
Commission
...”

The screenshot shows a web browser window titled "NewsBrief" with the URL <http://emm.newsbrief.eu/NewsBrief/g>. The page header includes "Emm NewsBrief" and "Joint Research Centre" with a note "Updated every 10 minutes, 24 hours per day." The main headline in bold Portuguese reads: "a qualidade do ar a que estão expostos e concluíram que ambientes interiores são mais perigosos para a saúde do que exteriores, mesmo tendo em conta a poluição dos automóveis." The text continues: "Esta foi uma das conclusões do programa, inédito a nível europeu, 'EuroLifenet - Ambiente/Saúde/Cidadania: Educação para o desenvolvimento sustentável', que foram hoje apresentadas." Another paragraph states: "Mais de 600 alunos de escolas do ensino básico e secundário de Portugal e Itália levaram a cabo o primeiro estudo em larga escala sobre a exposição pessoal ao poluente atmosférico PM2.5 (as partículas mais pequenas suspensas no ar), um dos que maior impacto tem na saúde humana, nomeadamente na sua relação com as doenças respiratórias." The final paragraph, partially visible, mentions: "Pedro Ferraz de Abreu, presidente do Centro Comum de Investigação da Comissão Europeia (CITIDEP), um dos envolvidos no projecto, destacou o facto de esta ser a primeira vez que se faz um estudo de exposição pessoal, o que permite aferir a qualidade do ar dos meios em que as





Media

ELN
SIC





Media

ELN
BIO





EuroLifeNet / CiênciaViva

www.eurolifenet.eu



EURO-LIFE-NET:

Participatory Science:

Citizens role enabling local indicators for local planning

NEXT STEPS:

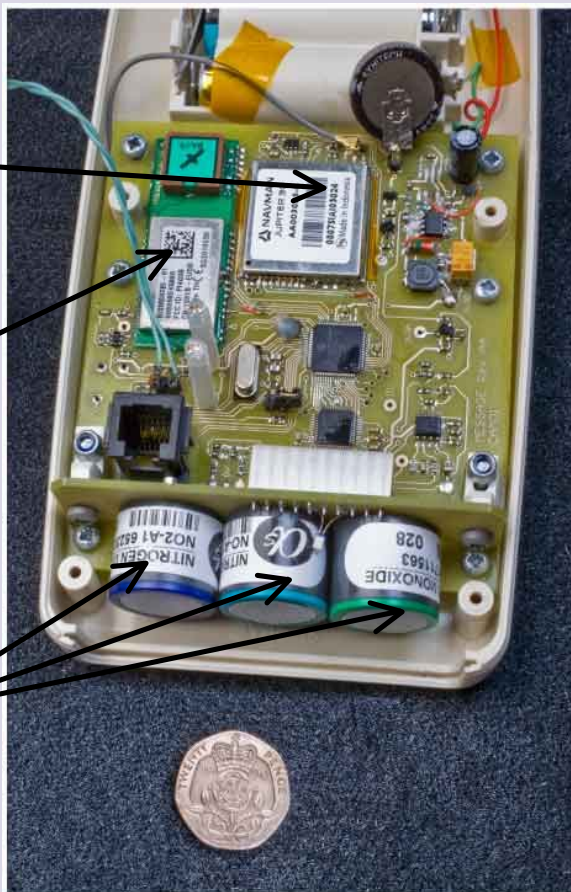


Portable Sensor units for citizens

Satellite navigation

Mobile phone

Gas sensors



400 gm (incl. batteries)

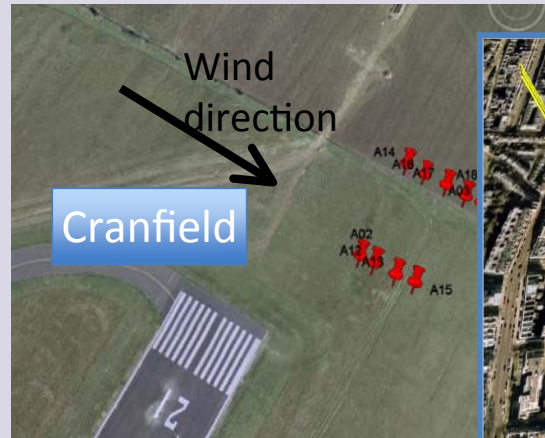
Simple operation!



Rod Jones, Cambridge U. , UK



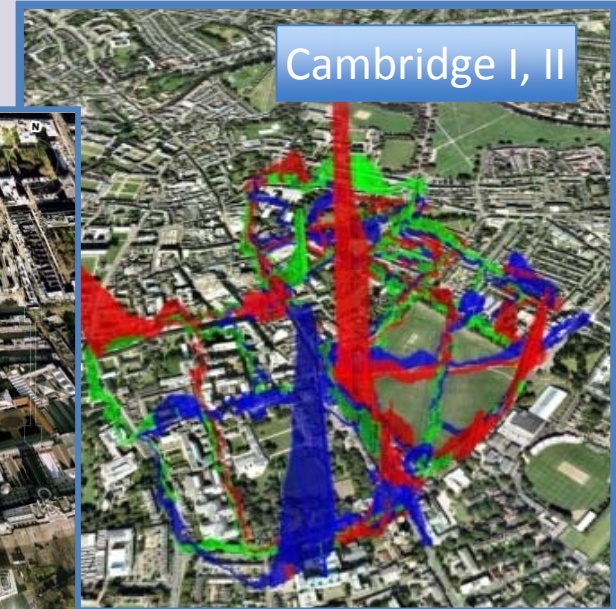
Deployments to date:



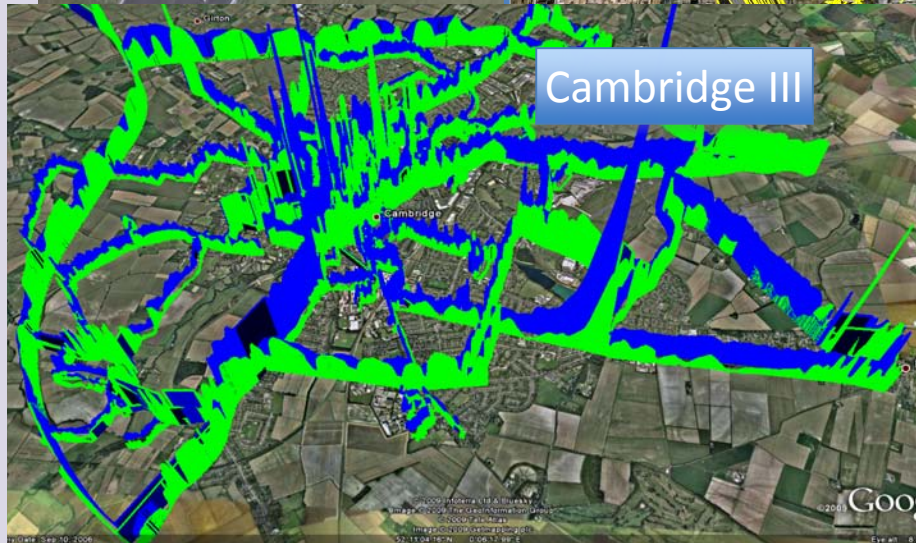
Cranfield



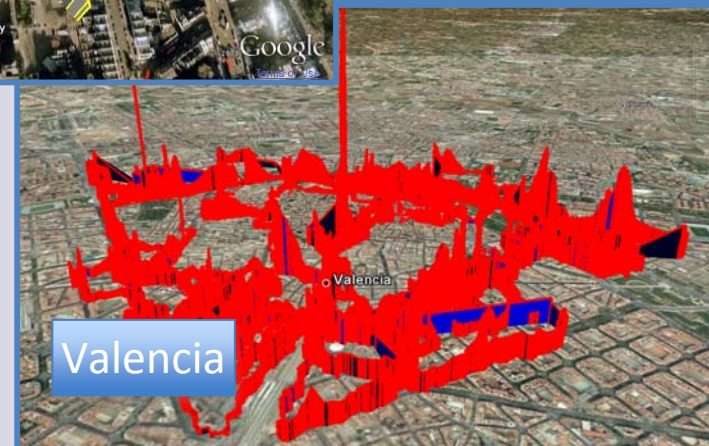
London



Cambridge I, II



Cambridge III



Valencia

Rod Jones, Cambridge U. , UK

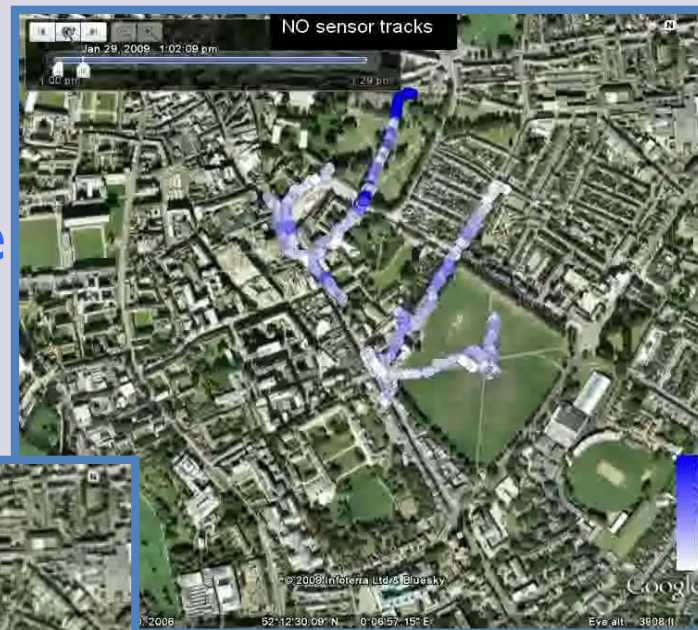


Multi-species real time mobile measurements of air quality in complex environments



Carbon
Monoxide
CO

Nitric
Oxide
NO



Nitrogen
Dioxide
NO₂



Rod Jones, Cambridge U. , UK



Cambridge deployment

September 2009: NO_x



Rod Jones, Cambridge U. , UK



Pollution events: city CO plume?



Rod Jones, Cambridge U. , UK



New Strategic Thinking for ICT & Public Policy

- **Empowerment policies**

A new dimension of urban planning

ICT change the rules for economy & planning

- Vendor ("Smart" Industry) interests vs. City interests =>
 - Centralized/Integrated vs. Distributed
 - Vendor standards vs. Open standards
 - Who owns the data?
 - Citizen empowerment vs. Industry control
 - Big Brother vs. accountability

“It’s the Upload, Stupid”



New Strategic Thinking for ICT & Public Policy

- **Empowerment policies**

A new dimension of urban planning

ICT change the rules for economy & planning

- Value of data profiling and abuse of privacy

AND AGAIN:

- Control of the infrastructure (ISP) and also of contents (& services):
“Net Neutrality” issue
- Assimetric “broad” band (consumer vs citizen)
“It’s the Upload, Stupid”



Systemic view

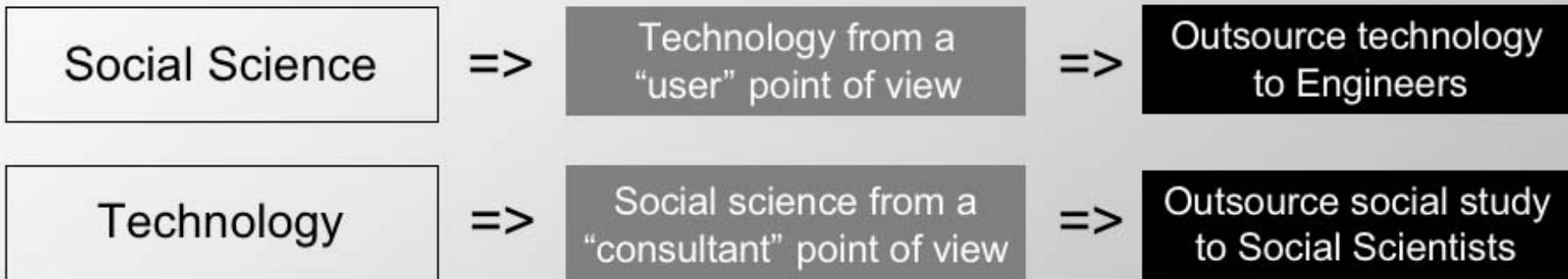


- Conservation vs. Development (Olmstead)
- Corner - blessing or curse



MIT-Portugal / e-Planning Approach

Going past the traditional “blackbox” disciplinary approach...



*... the new **e-Planning** synoptical transdisciplinary approach:*





Joint PhD Program on e-Planning

**Doutoramento
e-Planning**

UTL

UNL

UL

UA

Colaboration
MIT-DUSP

e-infrastructure	e-planning knowledge infrastructure
e-government	e-planning for the government of the future
e-governance	e-planning for a new governance
e-city & territory	e-planning for the city of the future
e-citizenship	e-planning for a new citizenship

www.e-planning.org



Participatory Science

CITIDEP PROGRAMS

Citizenship & ICT

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- ICT & participatory science
- ICT & participatory democracy
- ICT, inclusion & cooperation
- ICT, policy & strategy



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- ICT & Inclusion,
Literacy, Cooperation

- Smart Cities, Cohesion
& Participatory Systems

- Internet Governance,
Open Data, Security with
Privacy



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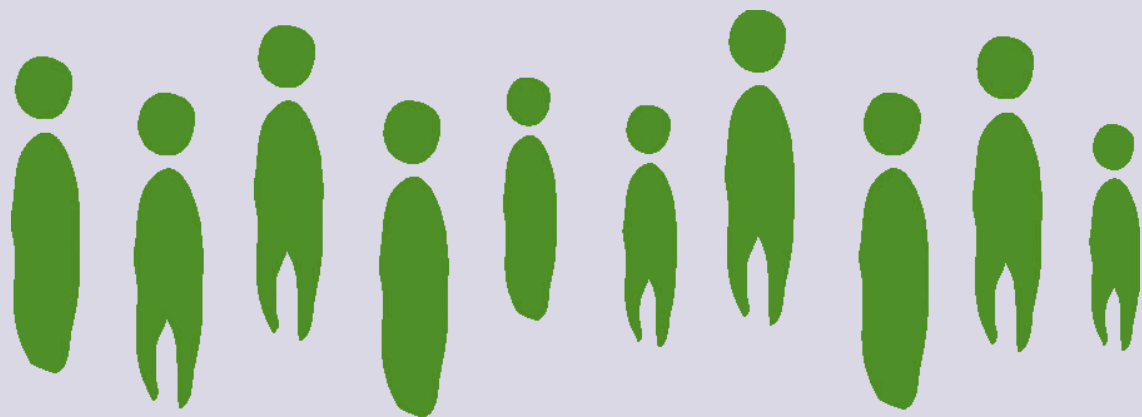
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- Smart Cities, Cohesion & Participatory Systems

- Internet Governance, Open Data, Security with Privacy



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