

Guàrdia Urbana

Management System: Traffic Accidents and Reports

Valencia, 14th and 15th of June 2007



Management System: Traffic Accidents and Reports

Definition:

A database where all the patrols directly enter the data obtained in the fieldwork.

That integrates graphic design tool (sketch).

That allows geocoding the impact point and the exact geographical coordinates of the collision point.

That allows obtaining the accident concentrations with a more accurate system than the postal address.



Management System: Traffic Accidents and Reports





Database

The database is approximately composed of 300 fields arranged like this:





Database

300 fields arranged like this:

+ than 30 --> time-space of the accident

time

place

Road signs

visibility

accident type

crossroad signs

light

patrol

Weather condition

date



Database

300 fields arranged like this:

- + than 30 --> time-space of the accident
- + than 30 --> about every involved driver

surnames
gender
Date of Birth
address
forename
Place of Birth
Phone numbers
Driving licence course
Date of del. driv.
licence



Database

300 fields arranged like this:

- + than 30 --> time-space of the accident
- + than 30 --> about every involved driver
- + than 20 --> about every involved vehicle

brand
model
Registration
number
damages
class
holder
Number of the SOV police
Insurance company
SOV expiry date



Database

300 fields arranged like this:

- + than 30 --> time-space of the accident
- + than 30 --> about every involved driver
- + than 20 --> about every involved vehicle
- + than 50 --> S.C.T. statistics

events

tacograph use

road type

speed limit

number of
carriageways

responsability

use of safety devices

junction type



Database

300 fields arranged like this:

- + than 30 --> time-space of the accident
- + than 30 --> about every involved driver
- + than 20 --> about every involved vehicle
- + than 50 --> S.C.T. statistics
- + than 25 --> about alcohol level

date

time

result

Identification of the devices used

procedure

Blood test



Database

300 fields arranged like this:

- + than 30 --> time-space of the accident
- + than 30 --> about every involved driver
- + than 20 --> about every involved vehicle
- + than 50 --> S.C.T. statistics
- + than 25 --> about alcohol level
- + than 25 --> about every single passenger or pedestrian

condition

forename

surnames

phone numbers

address

Place in the vehicle

injury severity



Database

300 fields arranged like this:

- + than 30 --> time-space of the accident
- + than 30 --> about every involved driver
- + than 20 --> about every involved vehicle
- + than 50 --> S.C.T. statistics
- + than 25 --> about alcohol level
- + than 25 --> about every single passenger or pedestrian
- + than 120 > sketches, photos, actions on the vehicles, photos, damages to elements...

photos

Description of the elements

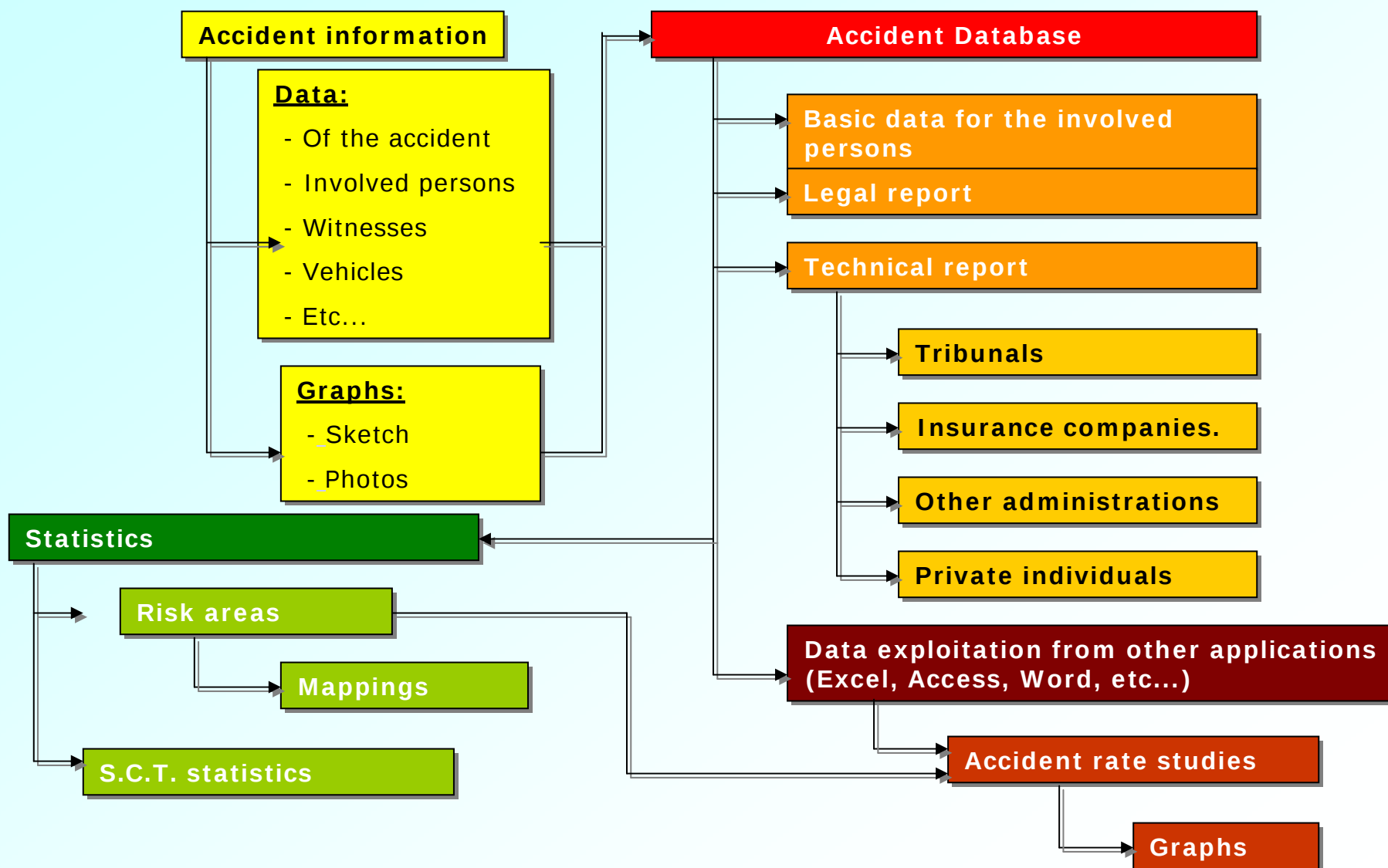
Owners of the elements

Insurance companies of the elements

Actions on the vehicles

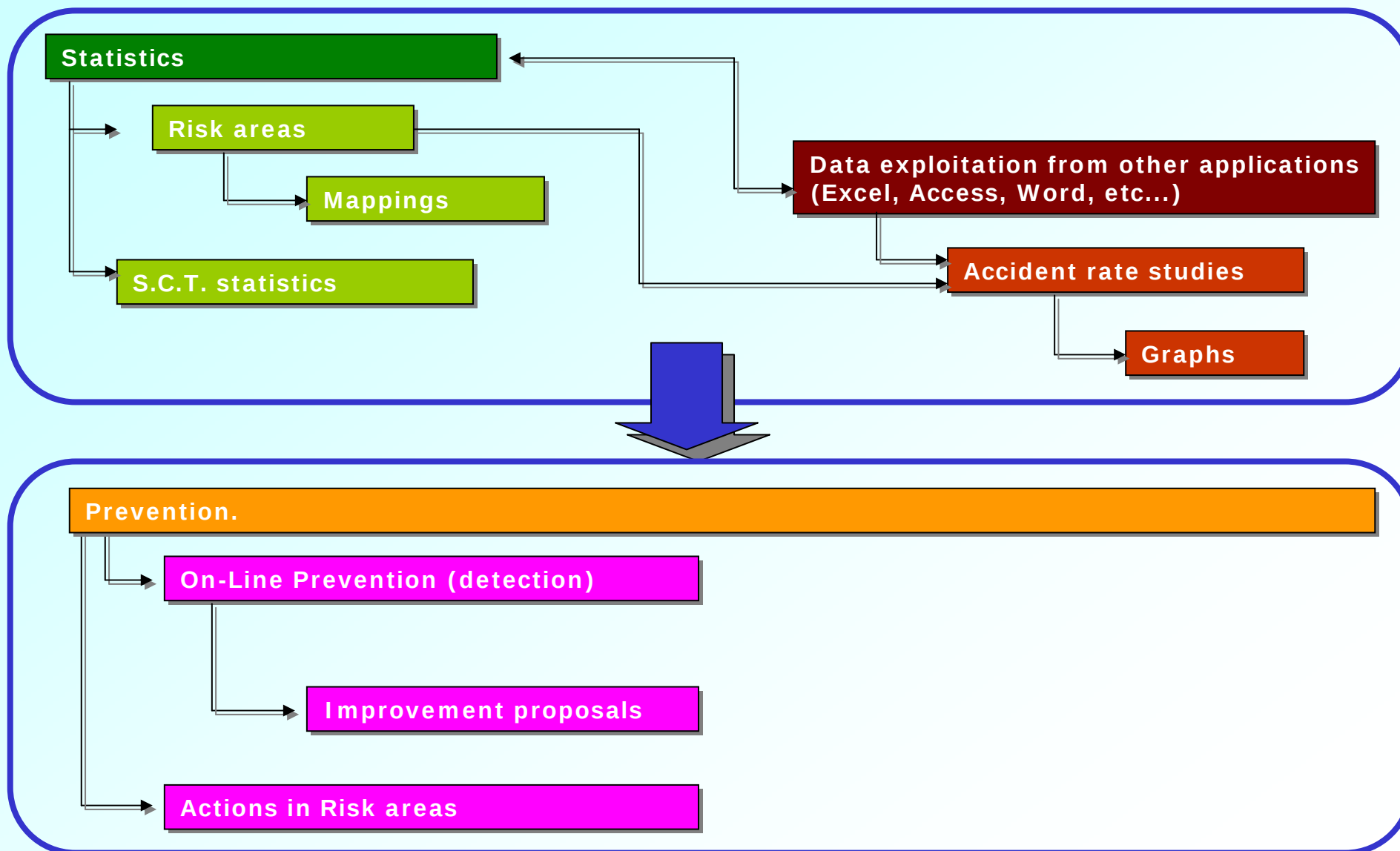


Diagram 2002 - 2007





2007 - 2010. Towards Prevention





The preventive cycle



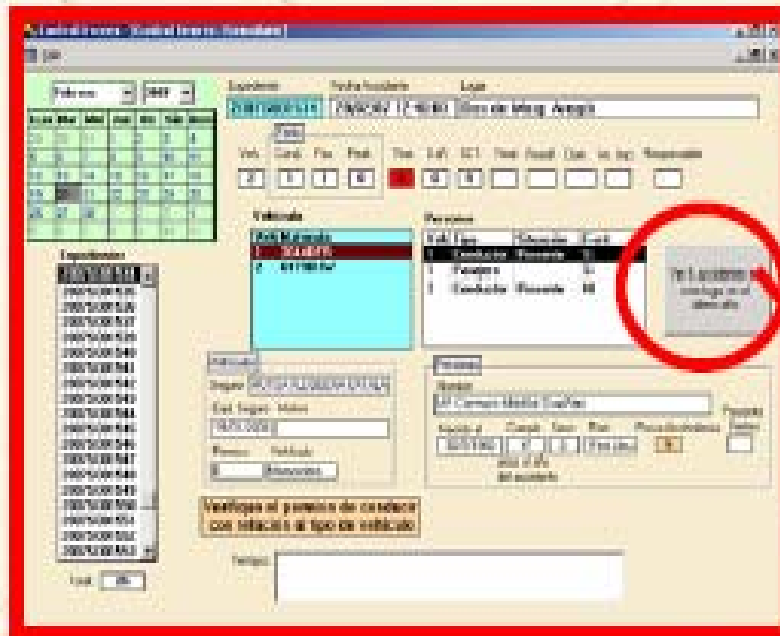
Nowadays a new multi-user application that is fed from the database is on trial and on development and we will call it:

“Improvement proposals”



On-Line Prevention Application

The role: On-Line Prevention, provides information about the accidents of the last 365 days on the same scene where the patrol is working.



Ver 6 accidentes
en este lugar en el
último año.



On-Line Prevention Application

This information, together with the patrol's perception, has to contribute to identifying whether this scene has a particular problem.

GrupAccidents | Formulari

Fecha: 20/02/2007
Seleccionar expediente: 2007S001534

Criterios:
Periodo en días: 365
Distancia en metros: 25

Lugar: Dos de Maig, Ansoé
Clase de accidente: Col·lisió lateral
Causa del Conductor: Manca d'atenció a la conducció
Causas mecàniques:
Causa peatons:

Expedients encontrados: 6

Expedient	Fecha	Hora	Clase
2006S006851	11/08/06	12:35	6
2006S007815	23/09/06	10:45	3
2006S007933	26/09/06	11:25	6
2006S009966	29/11/06	15:40	5
2006S010248	11/12/06	18:40	0
2007S001534	20/02/07	12:40	5

Vull fer una proposta de millora

Clase	Ciclo motor	Furgoneta	Motocicleta	Turisme		
Abast			1	1		
Atropellament				1		
Caiguda (dues rodes)	1			1		
Col·lisió fronto-lateral	1	2	1			
Col·lisió lateral			1	1		

Causa	Abast	Atropellament	Caiguda (dues rodes)	Col·lisió fronto-lateral	Col·lisió lateral
Conducció de camió sense precaució			1		
Descobrir semàfor				1	
Gir indegut o sense precaució	1			1	
Manca d'atenció a la conducció					1
No determinada		1			



Improvement Proposals Application

Any improvement proposal has to be carried out through an automated procedure composed of the following stages:

- Problem identification
- Objective definition
- Action design
- Execution plan
- Follow up
- Assessment





Share Knowledge

The computerization and the assessment of the improvement proposals allow disposing of a catalogue of solutions, already executed, by order of efficiency (accumulation of experience).

Acció:

A screenshot of a web application interface. On the left, the text 'Acció:' is displayed. To its right is a dropdown menu. The menu is currently open, showing a list of options. The first option, 'Mirall Parabòlic', is highlighted in black with white text. Below it are three other options: 'Senyal Horitzontal', 'Semàfors', and 'Senyal Vertical', all in black text on a white background. The dropdown menu has a thin black border and a small downward-pointing arrow on the right side of the top bar.

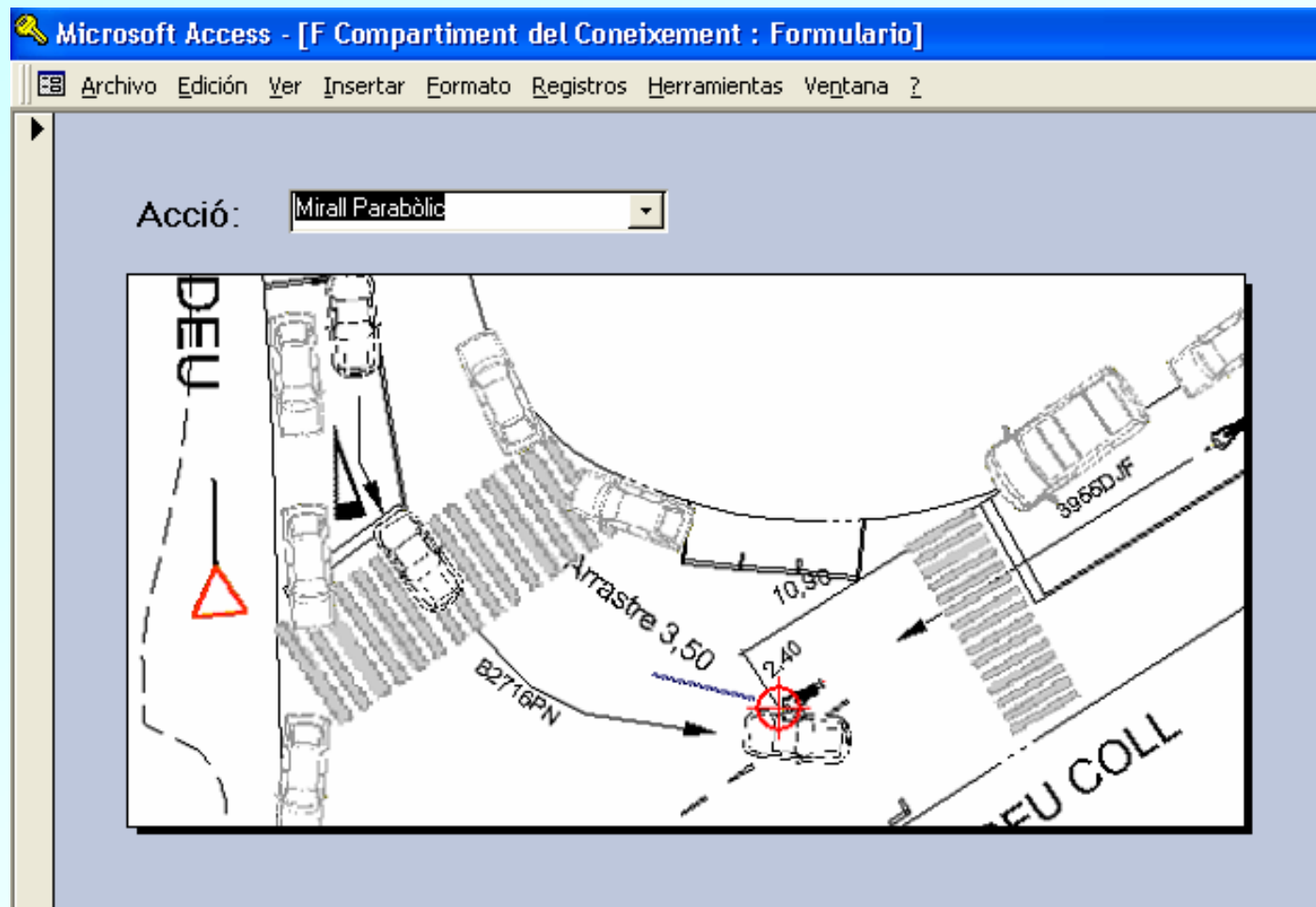
Mirall Parabòlic
Mirall Parabòlic
Senyal Horitzontal
Semàfors
Senyal Vertical



Share Knowledge

(Example: Mare del Déu del Coll/ Cardedeu)

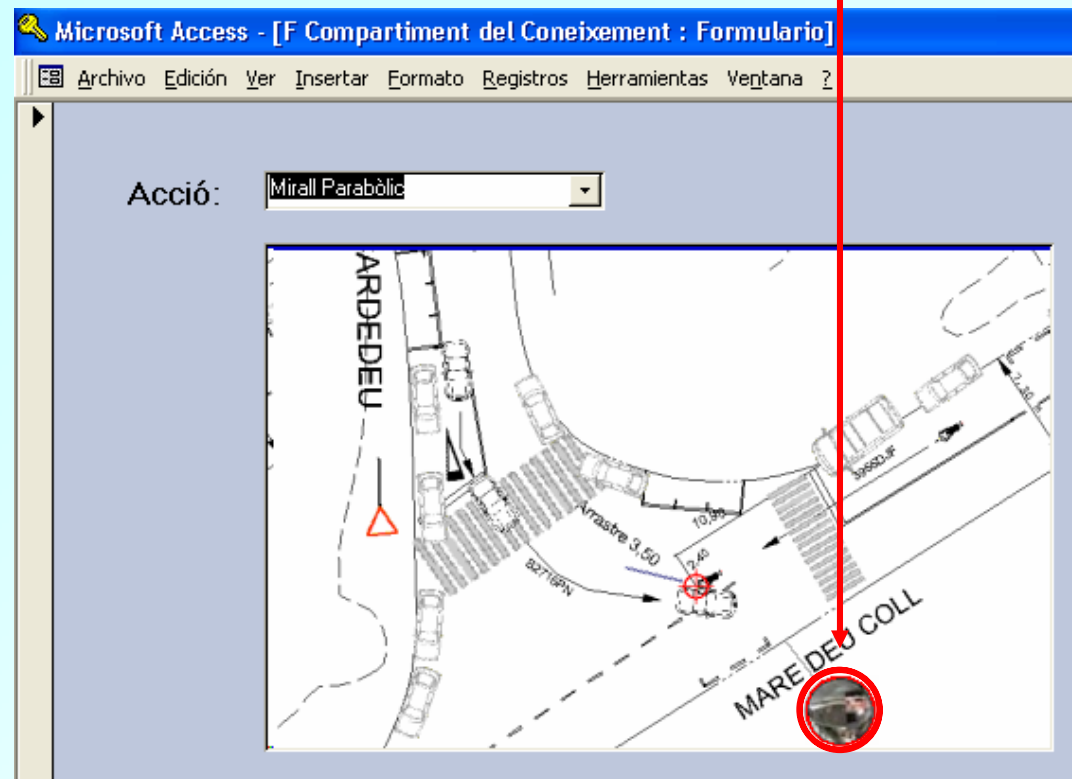
The patrol concludes that the cause of the accidents here is, mostly, for not observing the give-way sign affecting the vehicles coming from the Cardedeu street.





Share Knowledge (installing a parabolic mirror)

The patrol proposes to install a **parabolic mirror** at the junction to **increase the visibility** of the vehicles that are circulating by the Cardedeu street and have to obey the give-way sign.



Once the improvement has been implemented the accident rate is reduced of
100%

From 6 accidents in the prior period, there are none in the subsequent period.



Share Knowledge

Catalogue that can be consulted at any time by the agents aiming to make the proposals more and more effective.

Àrea:	Reducció de Velocitat
	Altres mesures físiques Campanyes preventives Controls Educació i formació Itineraris vianants Reductors de velocitat
Pòrtic en	



Share Knowledge

Microsoft Access

Archivo Edición Ver Insertar Formato Registros Herramientas Ventana ?

Àrea: Reducció de Velocitat

Mesura: Pòrtic en

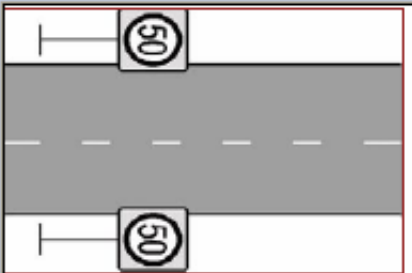
Altres mesures físiques
Campanyes preventives
Controls
Educació i formació
Itineraris vianants
Reductors de velocitat

Tipus de via (límit velocitat)		
Bàsica (50 km/h)	Secundària (30-50 km/h)	Vial (20-30 km/h)
•	•	•

Avantatges: Indica clarament el canvi de límit de velocitat. La reducció de velocitat dependrà del disseny i serà més eficient en combinació amb altres elements reductors. Fàcil instal·lació. Solució econòmica

Desavantatges: No evita físicament l'incompliment del límit de velocitat. Requereix espai lateral

Observacions:





Evaluation and motivation

100% Cerrar

Dades proposta:

Balnes	Data proposta:	6/2/2003
Carrer/s	Gv Corts Catalanes	

Em complau informar-li que hem fet una anàlisi global de la influència que ha representat la seva proposta de millora envers l'accidentalitat.

Una vegada executada la millora proposada, aquesta ha contribuït a disminuir la taxa d'accidentalitat a Barcelona.

A més de felicitar-li per la seva tasca, dedicació i vocació, li facilitem per a la seva informació el resultat d'aquesta anàlisi:

Disminució accidentalitat en percentatge al lloc: -12,12 %

Página: 1

Preparado



Guàrdia Urbana

Thank you for your attention

